

PUBLIC OPINION RESEARCH INTO BIOTECHNOLOGY ISSUES

Executive Summary

FIFTH WAVE

**Presented to the Biotechnology Assistant Deputy Minister
Coordinating Committee (BACC), Government of Canada**

December 2001

Prepared for the Biotechnology Assistant Deputy Minister Coordinating Committee, Government of Canada, by Pollara Research and Earnscliffe Research and Communications.

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Introduction

Earnscliffe Research and Communications is pleased to present this report on a public opinion research program conducted in the fall of 2001 for the Assistant Deputy Minister Coordinating Committee (BACC). This was the fifth wave of a series begun in the fall of 1999. This wave was comprised of two separate instruments:

- a telephone survey of 1200 Canadians;
- five sets of focus groups (a total of 10 groups) to support the survey.

The research was designed to accomplish two major objectives:

- to track sentiment on a range of biotechnology issues, using a baseline of data developed in previous waves of research; and
- to assess opinion more comprehensively in two discrete areas, stem cell research and GM food labeling.

The research probed a number of areas of investigation in order to develop a comprehensive analysis of current opinion on biotechnology. The areas included:

- overall awareness and familiarity;
- perceived risks, benefits and drawbacks;
- attitudes towards a variety of biotechnology applications;
- assessments of government performance in biotechnology, and preferred roles and priorities for government; and
- information-seeking behaviour.

The telephone work began on September 26, 2001, and ended on October 4, 2001. The survey reports on the views of a random sample of 1200 Canadians and carries a margin of error for the national sample of +/- 3.1%, nineteen times out of twenty.

Five nights of focus groups (10 groups in all) were conducted in Halifax, Montreal, Toronto, Saskatoon and Vancouver between October 22, 2001 and October 30, 2001.

The focus groups followed a set agenda for discussion and probed in more detail the opinion underlying the results of the telephone survey. Each night comprised a group of approximately 10 participants drawn from the general population and a group of similar size of *Involved Canadians*, our proprietary population segmentation of Canadians who are significantly more interested and involved in public policy issues.

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Executive Summary

Trend Lines

The overall results were highly consistent with those of previous waves, indicating a continuing positive predisposition to biotechnology. There were no significant new trend lines that emerged in this inquiry but there was further evolution in tendencies that have emerged over time.

Opinion towards biotechnology – its processes, products and applications -- continues to become more considered and nuanced even though detailed understanding and engagement remain very low. More Canadians are gravitating towards the middle of the opinion spectrum on a variety of issues, reflecting the degree to which they carry mixed views about some of those issues and their determination to evaluate all they hear on a case-by-case basis. Generally, that movement towards the middle comes from those who have been strongly supportive of the technology. Nevertheless, there is no significant increase in opposition other than in the area of genetically modified food, where negative opinion has been increasing modestly.

Fear of long-term risk to human health continues to be the main driver of concern about the technology. The test for acceptability of its products and processes continues to be the extent to which there is the fact or promise of a “marginal personal benefit” that accrues to the individual. The larger the benefit (and there is a clearly articulated hierarchy of benefits, beginning with health and medical benefits), the more likely it is to alter the risk/benefit equation towards acceptance.

And although there continues to be virtually no detailed understanding or knowledge of the federal government’s regulatory practices and imperatives, there is a sense that the systems are sound and food on the shelves is safe. However, consistent with the more considered views that are emerging, there is a preference that the government increase its emphasis on the stewardship role.

Awareness and Familiarity

There continues to be a curious blend of high awareness of biotechnology mixed with low levels of interest, engagement and knowledge. The results show that a clear majority of Canadians have discussed the issue – even more so among Involved Canadians. Nevertheless, there has been very little change in the number of people who say they are very familiar with biotechnology, probably the best indicator of strong interest and engagement. Generally, people don’t see the prospect of any immediate personal interaction with biotechnology and, as a result, don’t see the point in expending significant time on finding out more. This is quite clearly not the case among those with a strong vested interest in biotechnology. They tend to be those who have direct experience with serious illness or genetic disorder that might be affected by new

discoveries or those who are implacably hostile to biotechnology, fearing irreversible damage to human health or the environment.

Top-of-Mind Impressions

Most Canadians are positively disposed to biotechnology. As a word, it engenders mostly positive or neutral reactions – a bit of a follow-on halo effect from Canadians' overwhelming presumption that there will be significant positive impacts from the expansion of high technologies. When asked specifically whether they support or oppose products and processes involving biotechnology, the third that expressed a positive top-of-mind reaction grows to almost 60%. There has been a small increase in opposition to biotechnology over the past year with women, older Canadians and people with lower income tending to be more negative than the average. This seems to correlate with somewhat increasing levels of discomfort with and opposition to genetically modified food.

Biotechnology Applications

The survey tested 16 current and prospective biotechnology applications to see whether people agreed with their use. Canadians insist on evaluating biotechnology applications on a case-by-case basis. Each case is approached with a virtually explicit risk/benefit analytical framework. The risk part of the equation is driven by the general presumption that there *is* currently unknowable, long-term potential risk to human health that might well be irreversible. The arbiter yardstick then applied to the equation is the *marginal personal benefit*. In other words: “do the potential benefits of the application (compared to non-GM products already available) outweigh the potential risks to myself or my family?” A hierarchy emerges where health and medical applications demonstrate the greatest marginal personal benefit and food applications the least.

There is one further set of variables in decision making -- the tension between purpose and process. The purpose (or outcome/benefit) is the key positive driver. The process is an important negative driver along with risk. The larger the degree of intrusiveness of the procedure and the greater the extent to which it involves crossing boundaries between plants, animals and humans, the more the resistance that has to be overcome by the putative benefit.

Of the new applications tested, the two that garnered the greatest support involved applications to treat Type One diabetes (despite its invasiveness) and genetic detection technologies like plastic food wrap with antibodies to detect bacteria or toxins in food.

The new applications that garnered the greatest opposition involved cloning animals (like cows) as a source of food and the introduction of GM wheat.

Where Canadians seem willing to assume a generalized benefit from biotechnology applications is in their economic impact. True to their predisposition to approve of high

technologies, Canadians assume biotechnology applications in health, environment and agriculture will yield significant benefits to the Canadian economy. It is just that those benefits are not important enough, in some cases, to overcome the risk/benefit test.

Evaluating Risk

Absent discussion of benefits, statements about the risks inherent in biotechnology are quite compelling. There is a baseline attitude among many people that suggests that the long-term risks of biotechnology are unknowable and cannot be disproved or dismissed. Layered on to that attitude is the presumption that negative impacts, should they occur, are probably “irreversible.”

By a wide margin, the evidence shows that risks to human health are the primary driver of concern about biotechnology – more so than concerns about the environment, ethics or moral values.

When statements about risk are balanced with benefit statements or with measures to mitigate risk, support returns. The point is that the benefits of many applications are not “top of mind” but, when entered into discussion, are powerful and desirable outcomes that tilt the risk/benefit equation positively. That underlies the general predisposition to allow the development of biotechnology.

When the consistent use of science in regulation and a commitment to engage in ongoing research into long-term risk are articulated policy elements, large majorities move towards supporting biotechnology. Most people accept that life is replete with risk but they want to know that government is trying to mitigate or reduce those risks as society seeks to gain the benefits.

Most people believe that GM products pose less risk than many other things, including nuclear waste and pesticides. Perhaps surprisingly, most rated the risks as lower than many everyday risks like car accidents and crime. Focus group discussion shows that the relatively low ranking of biotechnology risk helps to explain the predisposition to encourage its development and the willingness to trade benefits against risks in many of the suggested applications.

However, the willingness to accept risk reduces somewhat when the benefits are posited as those deriving from GM foods. Focus group discussion establishes that functional foods and nutraceuticals are relatively unknown, that many doubt whether they will ever exist and even if they did, that many do not understand the need to supplement what already is widely available by other means.

Government Priorities

The top priorities Canadians set for the federal government in dealing with biotechnology have remained quite consistent and include protecting human health and

the environment against risk and conducting long-term research into the impacts of the technology. In general, Canadians have begun to place more emphasis on the importance of stewardship than the importance of encouraging or promoting the development of biotechnology. Though they believe in both, strong stewardship values have become *a sine qua non*. That leads people to placing a higher priority than has been the case on enforcing regulations and working with other countries to develop common standards.

As a general proposition, most people believe the federal government must balance its activities. There is still widespread agreement with the framework that describes the government's primary function as understanding and managing the risks of biotechnology while working to gain its benefits.

The Regulatory System

Canadians have a large amount of confidence in the country's regulatory system although they express very little familiarity with it. Focus group work and previous research have shown that most people *want* to believe that the system is functioning well, in part because they feel unprepared to deal with the consequences if it were not. There is a widespread presumption that somewhere, someone is in charge and that the job is being done well and conscientiously. Large majorities say they are confident about the safety of products that have been approved by the federal government. They also think Canadian practices stack up well against those of other countries.

However, they are also quite convinced regulation should be increased. This runs counter to most Canadians' general view about government regulation and the need to make government less intrusive. Biotechnology, they agree, is a different order of activity that requires a different level of scrutiny because of the risks associated with it. They want strong mandatory regulation by government, utilizing effective technologies. They would also like Canada to work with other countries to develop common standards

Specific Issues – GM Food

These results indicated a moderately higher level of discomfort with GM food than in past waves. That translates into less willingness to buy GM foods and reduced appeal of some GM food applications.

Nevertheless, the discomfort has not translated into increased levels of concern about food safety. Confidence remains high that food is inspected and tested and that if it appears on the shelves, it is safe. Most people are now aware that there are GM ingredients in much of the food they purchase and are correspondingly aware that they have eaten GM foods at some point.

That reality - their presumption that food is safe combined with the fact that they have not heard of any ill effects of eating GM foods - means that the discomfort has not turned into an outright refusal to buy among the vast majority of Canadians.

Specific Issues – Labeling

There was a strong expression of support of mandatory labeling of GM food in the research.

Informed choice is the overriding driver of opinion on this issue. It is not that most people want a way to distinguish GM food so they can stop buying it; it is more that they believe everyone should have that option and that labeling is the only way to ensure that people can choose.

Most insist that labeling must be fully effective in providing choice. That leads them to a preference for mandatory labeling. Most in focus groups could not see the benefits of a voluntary system because the only test they would invoke to assess any labeling system is that it lead to full compliance. That seemed, to most, to be the same outcome as a mandatory system would provide. The added benefit of a mandatory system, in their view, was that it would be easier to enforce by government, and therefore more likely to be complied with.

There were no counter-arguments that changed most people's minds.

Most were not persuaded that segregating food from farm to table would be difficult or inordinately costly. Most people (two thirds) say they would pay 10% more to get labeling. It should be noted that this was not a true consumer market research design and will not accurately predict buying behaviour or price sensitivity. However, these results do show the degree to which the concept of informed consumer choice drives opinion. Few believed, for instance, that labeling would make shoppers more concerned about GM foods and lead to a widespread refusal to buy GM foods.

A discussion in the groups of some of the potential trade implications led to some concern about economic impact and job loss but, on the whole, moved few people.

When it came to the technical issue of whether foods containing traces of GM ingredients could be called GM free, about half insisted on 100% purity. About half would accept a 1% threshold, while only a third would accept a 5% threshold.

Specific Issues – Stem Cell Research

The issue of stem cell research has reached a surprising level of awareness and acceptance among Canadians during the relatively short time it has been topical. More than half have heard of stem cell research with the number rising to about 70% of Involved Canadians.

In focus groups, about a quarter of participants had a real sense of what was involved and why the area had become controversial – again, a surprising level of engagement. It appears, on the basis of the discussions, that most people have internalized that the research will lead to significant health benefits. For instance, about a third believe that stem cell research will be “very beneficial” to them personally. That, in turn, has driven interest in the research and increased awareness of its potential.

Most Canadians (about 70%) say they find stem cell research acceptable with a determined minority (about 1 in 5) finding it totally unacceptable.

The survey questionnaire deliberately posited a complex argument that went to the heart of the current debate in the United States. It set the potential of health breakthroughs alongside the need to use tissues from discarded embryos to see if the benefits trumped potential ethical concerns. They did. Focus group discussion indicated that people tend to assume embryos are aborted fetuses (raising negative views about use of their tissue) unless it is made explicit that they are weeks-old frozen products of in-vitro fertilization that were to be discarded in any case (in which circumstance there is no barrier to their use).

Most respondents want the government involved in supporting stem cell research. In focus groups, government involvement enhanced comfort with the research because it meant to most that government would insist on standards and regulation. Those standards would include ethical guidelines in the minds of most people.

Specific Issues – Information Seeking

Most people say they are not actively seeking out information on biotechnology. This is thoroughly congruent with the overall findings that most people are neither deeply interested nor engaged in the issues. Almost 7 in 10 respondents said they had never sought information or had done so only one or two times. A further 18% said they had done so a “few” times. And even of those who had sought information at least occasionally, half did so relatively passively through media consumption.

Print copies of the full report in English are available from:

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