
chapter 9

The Future of Biotechnology

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The final issues addressed in this study of public perception of biotechnology are: What should be done? Where do Americans stand on several key questions of government policy concerning biotechnology? Should genetic engineering and biotechnological research proceed? Should government funding of such research be continued? Should field testing of genetically altered organ-

isms in the environment be permitted? Should commercial use of genetically altered organisms be allowed? And, who should decide on questions involving the use of genetically engineered products? This chapter examines the American public's preferences toward the future of genetic engineering.

OPINIONS ABOUT BIOTECHNOLOGY AND REGULATION

The American people have mixed feelings about biotechnology and its regulation. On one hand, a majority (55 percent) says it agrees ("strongly" or "somewhat") that the risks of genetic engineering have been greatly exaggerated. A majority also says it believes that unjustified fears of genetic engineering have seriously impeded the development of valuable new drugs and therapies (58 percent) (table 60).

Yet, while Americans believe the risks and fears of genetic engineering have been exaggerated, the public also expresses concern about them. More than three-fourths of the public (77 percent) say

they agree with the statement that "the potential danger from genetically altered cells and microbes is so great that strict regulations are necessary." Forty-three percent report they "agree strongly" with the statement.

It appears that the public recognizes both the unreasonable fears associated with genetic engineering as well as real risks. The unreasonable fears are seen as having delayed significant benefits from this technology. But the public still comes down on the side of strict regulation of the technology because it perceives potential dangers from the innovations.

Table 60.—General Opinions About Biotechnology^a

Question (Q33):^b I will now read you a few statements. For each, please tell me whether you agree strongly, agree somewhat, disagree somewhat, or disagree strongly. (READ EACH ITEM.)

	Agree strongly	Agree somewhat	Disagree somewhat	Disagree strongly	Not sure
The potential danger from genetically altered cells and microbes is so great that strict regulations are necessary	43%	340/Q	14%	60/0	3%
The risks of genetic engineering have been greatly exaggerated	15	40	27	10	8
it would be better if we did not know how to genetically alter cells at all	13	20	34	31	2
The unjustified fears of genetic engineering have seriously impeded the development of valuable new drugs and therapies.	20	36	26	9	8
We have no business meddling with nature	26	20	31	21	2

^aPercentages are presented as weighted sample estimates. The unweighed base from which the sampling variance can be calculated is 1,273.
^bThe code number of the question in the survey instrument (See app. B).

SOURCE: Office of Technology Assessment, 1987.

SHOULD THE CLOCK BE TURNED BACK?

Many scientists believe that new developments in science and technology cannot truly be suppressed, and that innovations from biotechnology are here to stay. Nevertheless, it is important to examine how the public feels about this new group of technologies. Would they turn the clock back if they could? That is, what proportion of the public would prefer that humans not meddle with nature at all? It is important to understand the extent of public hostility toward genetic engineering and biotechnology.

The survey respondents were asked whether they agreed or disagreed with the statement: "It would be better if we did not know how to genetically alter cells at all." Nearly two-thirds of the public say they disagree with this notion. About an equal number disagree "strongly" (31 percent) as disagree "somewhat" (34 percent). In contrast, a third (33 percent) of the public report they agree and say they would prefer to turn the clock back. Slightly more than one in eight Americans (13 percent) "agrees strongly" that it would be better if we did not know how to genetically alter cells at all, and another 20 percent say they "agree somewhat" with the proposition.

Who are these people who feel it would be better not to know? The desire not to know is stated by more women (37 percent) than men (28 percent). Those who say they prefer that humans did not know how to genetically alter cells tend to be older—42 percent of those aged 65 and over say they prefer not to know, compared to 24 percent of the 35- to 49-year-old group (table 61).

Education and religiousness appear to have the greatest effect on the preference not to know. Those who say they would prefer that humans not know how to genetically alter cells declines from 43 percent of individuals without a high school diploma, to 34 percent of high school graduates, to 30 percent of those with some college, to 19 percent of college graduates. Conversely, the belief that it would be better not to know increases from 22 percent for the "not too religious," to 27 percent for the "somewhat religious" and 39 percent for the "very religious."

Table 61.—Profile of Population For or Against Genetic Alteration of Cells

Question (Q33): "I will now read you a statement. Please tell me whether you agree strongly, agree somewhat, disagree somewhat, or disagree strongly: It would be better if we did not know how to genetically alter cells at all."			
		Agree	Disagree
Total	(1,273)	33% ^a	65%
Sex:			
Male	(635)	28	70
Female	(638)	37	61
Age:			
18 to 34	(546)	32	68
35 to 49	(343)	24	76
50 to 64	(252)	38	56
65 and over	(127)	42	54
Education:			
Less than high school	(165)	43	54
High school graduate	(458)	34	65
Some college	(300)	30	69
College graduate	(347)	19	78
Place:			
Central city	(383)	36	64
SMSA^c remainder	(583)	32	65
NonSMSA	(307)	30	66
Religious:			
Very	(618)	39	58
Somewhat	(437)	27	72
Not too/not at all	(208)	22	76

^aThe code number of the question in the survey instrument (see app. B), bp...s are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

^cStandard Metropolitan Statistical Area.

SOURCE: Office of Technology Assessment, 1987

A comparison of the biotechnology-specific belief that it would be better not to know how to alter cells with the more general sentiment that "we have no business meddling with nature" indicates that the desire to turn back the clock is not specific to genetic engineering. There is strong agreement in public opinion on the two measures. About a quarter of the public (24 percent) feel that we have no business meddling with nature and that it would be better not to know how to genetically alter cells (table 62). Nearly twice as many (44 percent) say they disagree with both notions. There are relatively few persons who would prefer to turn back the clock on biotechnology and who are not opposed to our meddling

Table 62.—Comparison of Opinions About Genetically Altering Cells and Business Meddling With Nature*

	<i>It would be better if we did not know how to genetically alter cells</i>	
	Agree	Disagree
<i>We have no business meddling with nature</i>		
Agree	24%	200/0
Disagree	8	44

*Percentages are presented as weighted sample estimates. The unweighted base from which the sampling variance can be calculated is 1,273.

SOURCE: Office of Technology Assessment, 1987

with nature (8 percent). A larger proportion believes we should not meddle with nature, but does not feel it would be better not to know how to alter cells (20 percent). This latter group is interesting because it might represent a group of people who do not see genetic engineering as med-

dling with nature or people who feel there is no point trying to reverse time and undo technology.

Using these two measures of opinions about science, the OTA survey found that the underlying sentiment against technological development in the public might be estimated as low as 24 percent (agree with both statements) or as high as 52 percent (agree to either statement). Regardless of the extent, it should be noted that both these statements are underlying sentiments, not action statements. It is entirely possible to hold general preferences—in the abstract—that are inconsistent with specific preferences in concrete situations. While that does not mean that general preferences are not important or potentially influential, this Survey consistently found genetic engineering and biotechnology much more popular when the public was queried in specific instances rather than in the abstract.

GENETIC RESEARCH

The vast majority of the American public believes that research into genetic engineering should be continued. More than 8 of 10 Americans (82 percent) say they support continued research into genetic engineering. Only 13 percent of the public feel that genetic research should be stopped, and another 5 percent report they are not sure whether genetic research should be continued (table 63).

The degree of support for continued research is strongest among college graduates (90 percent) and those who are “not too religious” (90 percent). But genetic research is also supported by solid majorities of other subpopulations. Over three-quarters of the “very religious” (76 percent) think that research into genetic engineering should be continued. A similar proportion (77 percent) of those who think the dangers of genetic engineering are likely, nonetheless says it favors continued genetic research. More than 7 out of 10 persons (71 percent) who think human cell manipulation is morally wrong say they support continued genetic research. And 63 percent of those who feel that it would be better if we did not know how

to genetically alter cells say they believe research into genetic engineering should be continued. Clearly, a consensus exists among the American people that continued research into genetic engineering should proceed. This is a bipartisan, as well as a social, consensus with 80 percent of Republicans and 81 percent of Democrats stating support for such research.

At a somewhat broader level, the survey respondents were asked:

Do you believe that government funding for biologic research should be increased substantially, increased somewhat, remain about the same, decreased somewhat, or decreased substantially?

Despite a period of budget austerity and public concern about budget deficits, there is no popular support for cutting government funding for biologic research Only 10 percent of the public feel that government funding for biologic research should be decreased (“substantially” or “somewhat”). A substantial proportion (43 percent) thinks that government funding should stay the same. Finally, 40 percent of Americans think that

Table 63.—Opinions About Genetic Research

Question (Q34):* Do you think that research into genetic engineering should be continued or should be stopped?		Continued	Stopped	Not sure
Total	(1,273)	82%	13%	5%
Education:				
Less than high school	(165)	74	17	9
High school graduate	(458)	82	14	4
Some college	(300)	84	11	5
College graduate	(347)	90	6	4
Religious:				
Very	(618)	75	16	8
Somewhat	(437)	88	8	4
Not too/not at all	(208)	90	8	2
Better not to know:				
Agree	(374)	83	29	8
Disagree	(876)	92	4	3
Dangers of genetic engineering:				
Likely	(838)	77	18	6
Unlikely	(558)	90	7	3
Human cell alteration:				
Morally wrong	(484)	71	21	7
Not wrong	(715)	92	6	2
Party affiliation:				
Republican	(435)	80	15	5
Independent	(334)	86	11	3
Democrat	(441)	81	11	7
voters:	935	83	12	5

*The code number of the question in the survey instrument (see app. B).

^bPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1987.

government funding for biologic research should be increased (“substantially” or “somewhat”) (table 64). Furthermore, partisan disagreement over funding is relatively small—38 percent of Repub-

licans and 45 percent of Democrats say they favor increased government funding for biologic research.

FIELD TESTING OF GENETICALLY ENGINEERED ORGANISMS

Field testing of genetically engineered organisms is one of the most pressing issues of biotechnology facing the public. Some field tests of genetically engineered plants already have been completed. The Environmental Protection Agency (EPA) has approved small-scale field trials for engineered bacteria as a pesticide and “ice-minus” bacteria to protect plants from frost. Other applications for field tests have been submitted to EPA or other Federal agencies for approval. The first small-scale field trials of genetically engineered micro-organisms took place in the United States in April 1987. But what does the public think about such testing?

The OTA survey found overwhelming public support for field testing of genetically altered organisms on an experimental basis. Survey respondents were asked:

Do you think that environmental applications of genetically altered organisms to increase agricultural productivity or clean up environmental pollutants should be permitted on a small-scale, experimental basis, or not?

Eight often Americans (82 percent) think that small-scale field tests of these types of genetically altered organisms should be permitted.

Table 64.—Funding for Biologic Research

Question (Q35): Do you believe that government funding for biologic research should be increased substantially, increased somewhat, remain about the same, decreased somewhat, or decreased substantially?						
	Increase			Decrease		
	Substantially	Somewhat	Remain same	Somewhat	Substantially	Not sure
Total (1,273) ^b	11%	29%	43%	6%	40/0	7%
<i>Education:</i>						
Less than high school (165)	11	29	45	5	3	8
High school graduate (458)	11	28	44	8	3	6
Some college (300)	10	32	40	6	7	5
College graduate (347)	14	31	39	5	4	7
<i>Religious:</i>						
Very (618)	12	26	43	8	5	6
Somewhat (437)	9	34	43	5	2	6
Not too/not at all (208)	11	31	45	4	2	8
<i>Better not to know:</i>						
Agree (374)	9	21	48	9	8	5
Disagree (876)	13	34	40	5	2	7
<i>Dangers of genetic engineering:</i>						
Likely (636)	11	27	43	8	6	4
Unlikely (558)	13	33	42	5	1	7
<i>Human cell alteration:</i>						
Morally wrong (484)	8	23	47	10	7	6
Not wrong (715)	14	35	39	3	2	6
<i>Party affiliation:</i>						
Republican (435)	10	28	44	7	4	7
Independent (334)	8	29	43	8	5	7
Democrat (441)	14	31	41	5	3	5
Voters: (935)	10	29	44	6	4	7

^aThe codenumber of the question in the survey instrument (See app. B).

^bPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1987.

Politically, these field tests are supported by 80 percent of Democrats and 85 percent of Republicans (table 65).

Furthermore, like support for genetic research, support for environmental release on an experimental basis is found even among those groups that are less enthusiastic—in the abstract—about genetic engineering. Those who are very religious say they support field tests by a 79 to 15 percent margin. Those who feel that genetic engineering is likely to pose a serious danger to humans or

the environment state they support experimental release by a 78 to 18 percent margin. And, those who feel it would be better not to know how to genetically alter cells, nonetheless say they support field testing of genetically altered organisms by a 69 to 25 percent margin. No identifiable subset of the American population says it widely **opposes the environmental release of potentially beneficial organisms on an experimental basis.**

RELEASE IN YOUR COMMUNITY?

The acid test of public reaction to a policy initiative is what people would think if it were done in their community. There are many government activities that the public supports—prisons, waste

disposal, drug treatment—but not in their own neighborhood. To put the issue of public opinion about environmental release to a real test, the survey investigated the question in the context of the

Table 65.—Environmental Release on an Experimental Basis

Question (Q36): ^a Do you think that environmental applications of genetically altered organisms to increase agricultural productivity or clean up environmental pollutants should be permitted on a small-scale, experimental basis, or not?		Yes	No	Not sure
Total	(1,273)	82%	13%	4%
<i>Education:</i>				
Less than high school	(165)	77	15	8
High school graduate	(456)	82	15	3
Some college	(300)	86	11	2
College graduate	(347)	88	11	1
<i>Religious:</i>				
Very	(618)	79	15	6
Somewhat	(437)	87	11	3
Not too/not at all	(208)	85	14	1
<i>Better not to know:</i>				
Agree	(374)	69	25	5
Disagree	(876)	89	8	3
<i>Dangers of genetic engineering:</i>				
Likely	(636)	78	18	4
Unlikely	(556)	89	9	2
<i>Human cell alteration:</i>				
Morally wrong	(484)	76	19	4
Not wrong	(715)	88	9	2
<i>Party affiliation:</i>				
Republican	(435)	85	11	3
Independent	(334)	65	12	3
Democrat	(441)	60	15	5
Voters:	[935]	84	12	4

^aThe code number of the question in the survey instrument (see app. B).

^bPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1987.

respondents' own communities. Survey participants were asked:

Suppose your community was selected as the site to test a genetically altered organism—such as bacteria that protect strawberries from frost—where there was no direct risk to humans and a very remote potential risk to the local environment. Would you be strongly in favor, somewhat in favor, somewhat opposed, very opposed, or really not care if it were used in your community?

The OTA survey found that a majority of the American public (53 percent) says it favors (“strongly” or “somewhat”) field testing this type of genetically altered organism in its own community. Another 14 percent of the public say they “don’t care.” This leaves a third of the public (32 percent) who say they oppose field testing genetically altered organisms in their community under the described conditions of risk and benefit (table 66).

These results, however, do not represent blanket support of environmental release. The situation described in the question involves “(no direct risk to humans and a very remote risk to the local environment.” While it would have been interesting to test the effects of differential risk levels on the willingness to approve the use of genetically altered organisms in local communities, it was not possible within the constraints of the sample size and survey length. Based on the results presented in chapter 7, it is probably fair to assume that a different level of risk or type of risk would alter public acceptance rates for field testing.

Nevertheless, under the conditions described for a field test involving environmental release, most Americans say they would favor or be indifferent to having it performed in their communities. Those who feel it is better not to know about genetic engineering (38 percent), who feel human

Table 66.—Willingness To Test Genetically Altered Organisms in a Local Community

Question (Q39):^a Suppose your community was selected as the site to test a genetically altered organism—such as bacteria that protect strawberries from frost—where there was no direct risk to humans and a very remote potential risk to the local environment. Would you be strongly in favor, somewhat in favor, somewhat opposed, very opposed, or really not care if it was used in your community?

	In favor			Don't care	Opposed		Not sure
	Strongly	Somewhat			Somewhat	Strongly	
Total (1,273) ^b	14%	39%		140/0	21% ¹⁰	1.1%	20/0
<i>Education:</i>							
Less than high school (165)	16			15	18	13	1
High school graduate (458)	13	38		14	22	11	
Some college (300)	12	40		11	25	10	3
College graduate (347)	15	43		13	18	10	1
<i>Religious:</i>							
Very (618)	15	31		12	25	15	1
Somewhat (437)	14	49		14	15	6	2
Not too/not at all (208)		41		18	19	9	1
<i>Better not to know:</i>							
Agree (374)	9	29		12	28	21	2
Disagree (876)	17	43		15	18	6	1
<i>Dangers of genetic engineering:</i>							
Likely (636)	14	32		13	25	15	2
Unlikely (558)	15	48		15	15	6	<1
<i>Human cell alteration:</i>							
Morally wrong (464)	10	30		14	28	18	1
Not wrong (715)	18	45		14	16	6	1
<i>Party affiliation:</i>							
Republican (435)	14	42		15	19	8	2
Independent (334)	14	35		15	20	15	1
Democrat (441)	15	38		11	23	10	2
Voters: (935)	14	40		14	21	10	1

^aThe code number of the question in the survey instrument (See app. B).

^bPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1987.

cell manipulation is wrong (40 percent), or who think dangers from genetic engineering are likely (46 percent) are less likely to say they favor field tests in their community. But even among these subsets of the population most opposed to genetic

engineering in the abstract, no majority says it opposes field tests even in its own community as long as it involves no direct risk to humans and only a very remote risk to the local environment.

LARGE-SCALE ENVIRONMENTAL RELEASE

Although the public overwhelmingly supports small-scale field tests of environmental release, this does not mean they are ready for large-scale commercial uses. This sentiment is presaged in the earlier survey finding that a solid majority of the public felt that the potential dangers of genetic

engineering were sufficiently serious to require strict regulation. There is a reasonable inference that small-scale, experimental testing should be conducted under substantial public scrutiny. The issue of large-scale commercial application, however, evokes a different image.

Table 67.—Large-Scale Environmental Release by Commercial Firms

Question (Q37): ^a Do you think that commercial firms should be permitted to apply genetically altered organisms on a large-scale basis, if the risks of environmental danger are judged to be very small, or not?				
		Yes	No	Not sure
Total	(1,273)	42%	53%	5%
<i>Education:</i>				
Less than high school	(165)	41	51	7
High school graduate	(458)	41	55	4
Some college	(300)	41	55	4
College graduate	(347)	47	48	5
<i>Religious:</i>				
Very	(618)	39	55	6
Somewhat	(437)		51	5
Not too/not at all	(206)	48	49	2
<i>Better not to know</i>				
Agree	(374)	31	63	6
Disagree	(876)	46	48	4
<i>Dangers of genetic engineering:</i>				
.....	(636)	36	59	4
Unlikely	(558)	50	46	4
<i>Human cell alteration:</i>				
Morally wrong	(484)	33	63	4
Not wrong	(715)	49	45	5
<i>Party affiliation:</i>				
Republican	(435)	48	48	4
Independent	(334)	41	54	5
Democrat	(441)	39	56	6
<i>Voters:</i>	<i>(935)</i>	<i>42</i>	<i>53</i>	<i>5</i>

^aThe code number of the question in the survey instrument (see APP. B).

^bPercentages are presented as weighted sample estimates. The unweighted sample base is presented in parentheses so that the sampling variance for these estimates can be calculated.

SOURCE: Office of Technology Assessment, 1987.

Survey respondents were asked:

Do you think that commercial firms should be permitted to apply genetically altered organisms on a large-scale basis, if the risks of environmental danger are judged to be very small, or not?

A majority (53 percent) says that commercial firms should not be permitted to make environmental applications under these circumstances (table 67). Of all subgroups considered, only those who believe dangers from genetic engineering are unlikely say they approve large-scale uses by a 50 to 46 percent margin.

Why is there such a difference in public approval of small-scale field testing (82 percent) and large-scale commercial use (42 percent)? Several differences in the two survey questions could contribute to the different reactions. The environmental risk is described as "very remote" in one question and "very small" in the other. One explicitly states that there is no known risk to hu-

mans while the other says nothing about human risks. Hence, the stated risks may have been perceived differently.

However, the differences in the stated risk appear to be small. It seems more plausible that the implied risk of reduced control of large-scale application by a commercial firm is the main cause of the limited public approval. The overall survey evidence strongly suggests that while the public favors genetic engineering, it is concerned that the risks be controlled.

Who should decide whether commercial firms are permitted to apply genetically altered organisms on a large-scale basis? The most often cited source for deciding commercial applications is a government agency—preferred by 37 percent of the public. An external scientific body is preferred by 29 percent. Only 13 percent feel that this decision could be left to the company that developed the product (table 68).

Table 68.—Who Should Decide About Large-Scale Environmental Release^a

Question (Q38):^b Who should be responsible for deciding whether or not commercial firms should be permitted to apply genetically altered organisms on a large-scale basis—the company that developed the product, an external scientific body, a government agency, an industrial trade association, or other group?

	Total Voters	Party affiliation		
		Republican	Independent	Democrat
Government agency	37% 38%	38%	350/0	380/0
External scientific body	29 31	32	34	25
Company that developed product.	13 12	12	8	16
Public/voters/taxpayers/community	5 4	4	4	5
Industrial trade association	4 4	3	4	4
All other mentions.	8 8			
Not sure	5 5	4	5	5

^aPercentages are presented as weighted sample estimates. The unweighted base from which the sampling variance can be calculated is 1,273.

^bThe code number of the question in the survey instrument (See app. B).

SOURCE: Office of Technology Assessment, 1987.

CREDIBILITY OF RISK

Next to the perceived value of the outcome, the nature and the degree of risk associated with the product appear to be crucial to public acceptance or rejection of specific applications of genetic engineering. Complete agreement, however, on the nature and degree of risk in the application of new technology is rare. Moreover, in public debates on the appropriateness of technological applications, statements about the degree of risk are made by people with quite different roles and interests in the issue. The public frequently wonders whom to trust in these circumstances. The policymaker, on the other hand, has to worry about both who should be trusted and whom the public believes,

To determine how credible the public finds alternative sources of risk information, survey respondents were asked: "How likely would you be to believe statements about the risk of such a product made by (ITEM)?" Eight different categories of possible sources of information about risk were surveyed. The order in which the categories were presented was randomized.

The public says it is most likely to believe risk statements made by university scientists: 86 percent say they are at least "inclined to believe" statements about risks from university scientists. The OTA survey found that public health officials have more credibility with the public on questions of

risk than do Federal agencies. Eighty-two percent of the public say they are "inclined to believe" public health officials, compared to 69 percent who say they are "inclined to believe" Federal agencies. At the same time, the public reports it is more likely to believe Federal agencies (69 percent) than local officials (54 percent). The distinction in the public's belief in Federal v. local governmental officials is also seen on the public interest side. More Americans say they are at least "inclined to believe" environmental groups on statements of risk (71 percent) than unspecified public interest groups (63 percent) (table 69).

Finally, there is a clear distinction in the public's perceived credibility of two other information sources: the company making the product and the news media. While a majority of the public says it is at least inclined to believe risk statements presented by the other sources mentioned, only a minority of the public (45 percent) says it is inclined to believe statements about environmental risk made by the company making the product. Less credibility is given to statements made by the news media (43 percent).

Whom does the public believe when credible sources disagree? The public says that it is at least "inclined to believe" both Federal agencies (69 percent) and environmental groups (71 percent). Since risk assessments from these two sources have

Table 69.—Credibility About Statements of Risk^a

Question (Q40):^b How likely would you be to believe statements about the risk of such a product made by (READ ITEM)?
Would you definitely believe them, be inclined to believe them, be inclined not to believe them, or definitely not believe them?

	Definitely believe	Inclined to believe	Inclined not to believe	Definitely not believe	Not sure
University scientists	19%	67 ^A	8%	3%	30/0
Public health officials	15	67	12	4	2
Environmental groups	10	61		6	3
Federal agencies		60	22	6	3
Public Interest groups	8	55	27	7	3
Local officials	6	48	34	9	
Company making the product	6	39	37	15	3
News media	4	39	37	16	4

^aPercentages are presented as weighted sample estimates. The unweighted base from which the sampling variance can be calculated is 1,273.

^bThe code number of the question in the survey instrument (see app. B).

SOURCE: Office of Technology Assessment, 1987.

differed in the past, the survey respondents were asked,

Suppose a Federal agency reported that the use of a genetically altered organism did not pose a significant risk to your community but a national environmental group said it did pose a significant risk. Would you tend to believe the Federal agency or the national environmental group?

A majority (63 percent) of the public says it would believe the national environmental group—compared to 26 percent that would believe the Federal agency (table 70). This apparent lack of public trust in governmental pronouncements, when contradicted by another credible source, could be a serious stumbling block in future debates over the applications of biotechnology.

Table 70.—Credibility of Federal Government v. Environmental Groups^a

Question (Q41):^b Suppose a Federal agency reported that the use of a genetically altered organism did not pose a significant risk to your community, but a national environmental group said it did pose a significant risk. Would you tend to believe the Federal agency or the national environmental group?

Who believed	Percent
Federal agency	26
Environmental group	63
Depends	7
Not sure	4

^aPercentages are presented as weighted sample estimates. The unweighted base from which the sampling variance can be calculated is 1,273.

^bThe code number of the question in the survey instrument (see app. B).

SOURCE: Office of Technology Assessment, 1987.