



The New Science of Food: Facing Up to Our Biotechnology Choices

December 2002

The use of new biotechnology tools in our global agricultural and food system has rapidly increased during the past decade. Scientists can now use biotechnology to create characteristics in plants or animals by transferring genetic material from one source to another plant or animal. In the process, new personal and societal decisions emerge about these food and agricultural production practices. Here are three approaches for addressing the challenges.

APPROACH 1: Let Science and Enterprise Guide Our Food System

We should enhance rewards for biotech food and agricultural innovations, foster free enterprise, and base regulations on scientific evidence to benefit the world with an improved food supply.

APPROACH 2: Safety First — Protect Our Health and Environment

We should take extra precautions to ensure that all biotech food and agricultural innovations are safe for humans and the environment and monitor them to quickly resolve any problems.

APPROACH 3: Encourage Multiple Food Sources and Full Disclosure

We should encourage a variety of methods in food and agricultural production and encourage full disclosure to keep our options open as new information develops and preferences change.

Approaches and Choices; Choice Work, and NIF

If you're preparing to moderate a National Issues Forum, then you've become familiar with the structure of deliberative dialogue that NIF supports. Discussion guides, starter tapes, and deliberative forums focus on approaches, sometimes also called "choices" in NIF material.

And you know that each approach represents a distinctly different way of approaching an issue, with its own set of benefits, drawbacks, and tradeoffs.

This structure undergirds the basic premise of public deliberation — that citizens in a democracy have a responsibility, and need opportunities, to make choices about how they want to live together, how they want to act together, how they want their government to function.

Sometimes, forum participants find these uses of the word "choice" confusing. Some assume that they are being asked to choose one of the approaches. And, of course, they are not.

Many moderators find it helpful to clarify, at the beginning of the forum, that the work of the forum is to weigh each approach, to "work through" consequences and tradeoffs, and to form a shared sense of what's at stake in the issue. They make it clear that by developing shared directions for public action, forum participants are laying the foundation for making public choices together.

If this is your first experience as a moderator:

You don't have to be an expert on the issue.

Reading the issue book thoroughly, considering questions that get to the heart of the issue, and thinking through the essence of each choice is the critical part of preparation.

Stay focused on what the forum is about — deliberation.

Your natural curiosity and your interest in understanding diverse views will be your greatest assets; they're probably what got you here in the first place. So use them to ask questions that probe the underlying motivations of each approach, the tradeoffs it might require, and the willingness of the participants to recognize them.

Keep the discussion moving and focused on the issue.

No matter the level of experience, most moderators find timekeeping to be a challenge. National Issues Forums examine complicated issues, worthy of deep discussion. Sometimes, it's hard to move on to another approach with so much more that could be said. But in order to deliberate — to really make progress on the issue — participants need the opportunity to weigh all the major approaches.

Reserve ample time for reflections on the forum.

Between allowing time for participants to lay out their personal concerns about the issue at the beginning of the forum and the demanding work of deliberating in depth on each of the choices, it's easy to find yourself with little time left at the end of the forum to reflect on what's been said. But, in many ways, this is the most important work the group will do — if they have time to do it. Explain clearly at the outset that it is important to reserve this time, and then enlist the participants' support in working with you to preserve it.

Your Role as a Moderator:

- to provide an overview of the process of deliberation — the rationale for the kind of work the participants are getting ready to do.
- to remain neutral throughout the discussion, while encouraging participants to explore all facets of their own and others' opinions.
- to ask questions that probe deeply into what's at stake in the issue and in each approach.
- to keep track of the time, so participants can move through a discussion of each of the major approaches and into an ending period of reflections.
- to encourage participants to direct their responses and questions toward one another.

The Role of the Recorder:

- to support deliberation by reminding forum participants of their key concerns, the areas of greatest disagreement, and the benefits and tradeoffs their discussion highlighted.
- to help inform other members of the community about the outcomes of the deliberation.
- to serve as a written record of the group's work that might feed into future meetings of the group or additional forums.
- to capture the tensions, tradeoffs, and common ground for action.
- to express main ideas in clearly written brief phrases.

Forums or Study Circles — or Both?

Many NIF convenors choose to organize single forums around issues of concern in their communities. Most single forums last two- to two-and-one-half hours.

Many others, however, arrange multiple sessions (study circles) to allow participants greater opportunities to examine issues in depth. Some groups set aside time for two meetings; others might devote a separate session for each choice. And some plan ahead of time for a session after the forum to come back together to consider next steps.

Some communities begin their examination of an issue in a large group forum and then break off into smaller groups for subsequent sessions. The reverse also can be helpful — starting in small groups and culminating in a larger community forum.

National Issues Forums is about encouraging public deliberation. The needs of your community will drive the schedule in which deliberation can best occur.

Guidelines for National Issues Forums and Study Circles

At the beginning of deliberative discussion, most moderators review these guidelines with participants. (A free poster with these guidelines is available to use in your forum. You may request a copy by calling 800-600-4060.)

The moderator will guide the discussion yet remain neutral. The moderator will make sure that —

- Everyone is encouraged to participate.

- No one or two individuals dominate.
- The discussion will focus on the choices.
- All the major choices or positions on the issue are considered.
- An atmosphere for discussion and analysis of the alternatives is maintained.
- We listen to each other.

The importance of the questionnaires

Pre- and Post-Forum Questionnaires play an important role in your local forum — and in the national NIF network.

The Pre-Forum Questionnaire helps participants direct their thinking to the complexities of the issue, to take an assessment of the views they will bring to the discussion. Its structure focuses on what is at stake in the issue and what trade-offs might be involved.

The Post-Forum Questionnaire also serves multiple purposes. It gives participants an opportunity to reconsider their views in light of the experience they have just had. It gives them an opportunity to add to what they said or heard in the forum.

The questionnaires also serve a vital role outside of the forum. As a means of capturing what happened in the forum, they provide information that can be used to communicate participants' views to others — to officeholders, to the media, to other citizens.

Nationally, a report on the outcomes of the forums on a given issue is produced each year, based on extensive interviews with moderators and the questionnaires that forums generate. Some communities use questionnaires as part of reports on the outcomes of local forums.

So it is very important that you, as the forum moderator, take a few minutes to gather and return the questionnaires to the National Issues Forums Institute. Please include the moderator response sheet on page 12 with your contact information so that follow-up for the national report is possible.

Return the completed Pre- and Post-Forum Questionnaires to:

**National Issues Forums Research
100 Commons Road
Dayton, Ohio 45459-2777**

Communicating about your forums

Another important role of the moderator is to communicate with the NIF network about the forums you are conducting in your communities. Please post the dates and locations of your forums by E-mail at forums@nifi.org.

The New Science of Food: Facing Up to Our Biotechnology Choices

Questions to Promote Deliberation of the Issue

APPROACH 1: Let Science and Enterprise Guide Our Food System

- Are you comfortable with the fact that a large percentage of the current American food supply contains genetically modified ingredients?
- Would it bother you if control over the genetics of food production is concentrated in a few giant life-science companies?
- Is there a difference, from your point of view, between using new biotechnology in plants versus animals?
- Would you favor a slowdown in biotechnology if it meant that more people in developing countries would go hungry or suffer from malnutrition?

APPROACH 2: Safety First – Protect Our Health and Environment

- Do you think there should be more independent testing of biotech foods before they are approved?
- If there is no scientific evidence of harm from biotech foods, is there any reason to prevent the mixing of biotech and nonbiotech foods?
- Do you think that the existing biotech monitoring system is adequate for protecting the environment and human health? Do you worry that serious unforeseen problems may develop?
- Are you worried that government regulation of biotechnology will increase food costs and reduce new products or procedures?

APPROACH 3: Encourage Multiple Food Sources and Full Disclosures

- Do you think that some people may be more sensitive to biotech foods than other people?
- The European Union (EU) requires mandatory labeling of biotech food products; the U.S. favors a voluntary approach. Which approach do you favor?
- Which do you think are healthier for human consumption, organic foods or biotech foods?
- Is being able to choose organic foods in the grocery store or on the restaurant menu important to you? Would you be willing to pay 50 percent more for organic foods than for similar foods containing biotech ingredients?

Comparing th

The use of new biotech tools in our food and agricultural system has increased dramatically during the past decade. Yet many consumers are only recently aware that the new tools of biotechnology may have been used in many of the foods they eat.

Industry leaders fear that misinformation will prevent future development of new biotech products. Environmental and consumer groups are concerned that large companies receive government approval to produce and sell biotech foods without informing consumers. Producers of nonbiotech foods are concerned about the impacts of biotechnology on their production methods and costs.

The challenge is to come to terms with the new tools of biotechnology — to face up to the science and views of others and to reconcile the opportunities and uncertainties. The responses will shape the incentives and choices for consumers, farmers, food companies, policymakers, and the global food system.

Approach 1

Let Science and Enterprise Guide Our Food System

Greater incentives for biotechnology innovation encourage rapid development to feed the world, help prevent diseases, make foods healthier, limit environmental damage, and protect our food crops from harmful insects and pests.

What Should Be Done?

- Conduct more research and make the findings available to the public.
- Shorten the time required for patent applications, increase rewards for new products or procedures, and have patent rights granted by one nation, accepted internationally.
- Work for uniform science-based food-safety standards domestically and internationally.
- Shorten the approval process for biotech products whose content is equivalent to that of approved products

Benefits

- Biotechnology efficiently helps produce more and better food to reduce world hunger, malnutrition, and environmental damage and improve human health.
- A free enterprise system rewards people with the most creativity, new ideas, and efficiency to deliver food that customers want.
- Science-based testing and regulations can reduce the public's fears about possible harmful effects from biotech foods.
- There is no scientific evidence of harm.

Drawbacks

- Current controls are not strong enough to prevent or anticipate long-term negative impacts.
- The benefits of biotech foods are often oversold.
- Control of the gene pool and food system is concentrated in a few very large companies.
- Product liability laws are inadequate to prevent biotech contamination of nonbiotech foods.

A Key Tradeoff

- Science and free enterprise create opportunities to help the world's food supply. However, costs may increase for nonbiotech foods, and some people are concerned about the risks they might pose.

Three Approaches

Approach 2

Safety First — Protect Our Health and Environment

Implement extra precautions to increase assurance that no harm is done to human health, nonbiotech food producers, and the environment.

What Should Be Done?

- Require additional research and testing before each biotech innovation receives approval.
- Establish independent biotech testing centers, allow more public access to test data, require independent tests, and increase funds for review and proof of a review.
- Establish greater capacity and authority to trace and monitor biotech foods after government approval and to impose recalls, take corrective action, and assess fines.
- Reduce the barriers to data sharing, proof of testing, research collaboration, and future discovery by altering patent laws.

Benefits

- Extra testing and analyses potentially avoid harmful impacts to human health, the ecosystem, and non-biotech food producers.
- Improved monitoring provides more assurance that safety concerns can be more quickly identified and addressed.
- Patents are less of a barrier to testing, collaborating on research, and making new discoveries.
- The international community and the public gain access to greater scientific capacity.

Drawbacks

- Extra testing and regulations increase biotech food prices.
- The reduction of incentives, in turn, reduces competitiveness, decreases the number of biotech innovations, delays consumer and environmental benefits, and possibly endangers lives.
- Extra testing and regulations can waste resources.
- Fear-generating tactics ignore the potential benefits and safety, unnecessarily add politics to the process, and slow the approval process.

A Key Tradeoff

- Extra precautions help ensure that all possible consequences are identified before potential harm can occur. However, extra regulations and monitoring may increase food costs and reduce new products and procedures.

Approach 3

Encourage Multiple Food Sources and Full Disclosure

Encourage multiple food sources — organic, natural, conventional nonbiotech, and biotech — to keep our food system options open.

What Should Be Done?

- Provide incentives and assistance to encourage a variety of food-production systems.
- Develop community food systems, direct-marketing networks, subscription farming, and new food-marketing strategies.
- Create clear labeling, full disclosure of production methods to improve monitoring, research on long-term impacts, and better food-source tracking methods.
- Strengthen laws to ensure competition.

Benefits

- Multiple food sources and full disclosure provide flexibility.
- The government provides better guidance to consumers, farmers, and policymakers when scientists and regulators can thoroughly track and monitor food sources.
- Standards for each food source ensure that products share consistent qualities.
- Clear and full disclosure allows consumers to make informed decisions.

Drawbacks

- Satisfying the tastes and preferences of consumers in wealthy nations may reduce resources for new products that are important to less-wealthy consumers.
- Multiple food sources and reduced-market concentration do not guarantee healthier, safer, or cheaper foods.
- Additional information confuses consumers who do not have the interest or expertise to evaluate food alternatives.
- Labeling and separating foods from multiple sources, when they are not substantially different, wastes time and resources.

A Key Tradeoff

- People gain flexibility and the opportunity to make more-informed choices. However, this may provide more information than some consumers want, and food costs may increase.

Suggested Format for an NIF Forum or Study Circle

Welcome

Let participants know who is sponsoring the forum/study circle. Stress the cosponsorship if several organizations are involved.

Ground Rules

MAKE CLEAR THAT THE FORUM IS NOT A DEBATE. Stress that there is work to do, and that the work is to move toward making a choice on a public policy issue. The work will be done through deliberation. Review the paragraph “How Do We Do It?” (see page 11). The responsibility for doing the work of deliberation belongs to the group. Deliberation is necessary because there are competing approaches to solving the problem.

Starter Video

Explain that the video reviews the problems underlying the issue, then briefly examines three or four public policy alternatives. In so doing, it sets the stage for deliberation. (Starter videos for each issue book are available from Kendall/Hunt Publishing Company at 1-800-228-0810.)

Personal Stake

Connect the issues to people’s lives and concerns — in the first few minutes — by getting participants to talk about their personal experiences with the issue, and to tell their stories. This makes the issue genuine, human rather than abstract. Some questions you might ask include: “Has anyone had a personal experience that illustrates the problems associated with this issue?” “Within your family, or circle of friends, is this an important issue?” “What aspects of the issue are most important to you?” “How does the issue affect people?”

The Forum/Study Circle Deliberation

Consistent with what deliberation is, moderators ask basic types of questions in a forum:

What Is Valuable to Us?

This question gets at why making public choices is so difficult: the approaches turn on things that people care about very deeply, such as being secure or being treated fairly. This question can take many forms:

- How has this issue affected you personally? (Usually asked at the beginning.)
 - What things are most valuable to people who support this option?
 - What is appealing about this approach?
 - What makes this choice a good idea — or a bad one?
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What Are the Costs or Consequences Associated with the Various Approaches?

This question can take as long as it prompts people to think about the likely effects of various approaches on what is valuable to them. Examples include:

- What would result from doing what this approach proposes?
 - What could be the consequences of doing what you are suggesting?
 - Can you give an example of what you think would happen?
 - Does anyone have a different estimate of costs or consequences?
-

What Are the Tensions or Conflicts in This Issue That We Have to “Work Through”?

As a forum progresses, moderators will ask questions that draw out conflicts or tensions that people have to “work through.” They might ask:

- What do you see as the tension between the approaches?
- Where are the conflicts that grow out of what we’ve said about this issue?
- Why is this issue so difficult to decide?
- What are the “gray areas”?
- What remains unsolved for this group?

Ending A Forum/Study Circle

Before ending a forum take a few minutes to reflect both individually and as a group on what has been accomplished. Questions like the following have been useful:

I. Individual Reflections

- How has your thinking about the issue changed?
- How has your thinking about other people's views changed?
- How has your perspective changed as a result of what you heard in this forum?

II. Group Reflections

- What didn't we work through?
- Can we identify any shared sense of purpose or direction?
- What tradeoffs are we, or are we not, willing to make to move in a shared direction?

III. Next-Step Reflections

- What do we still need to talk about?
- How can we use what we learned about ourselves in this forum?
- Do we want to meet again?

Questionnaire (Post-Forum)

The questionnaire is a way to face the conflict within ourselves. Often we discover aspects of each choice we hold most valuable. Yet, the things we care deeply about are often in conflict. Please return the questionnaires and the Moderator Response sheet on page 12 after the forum.

Suggested Time Line

Stages of a Forum/Study Circle

15% for Opening

- Welcome** — The convenor or moderator introduces NIF program.
- Ground Rules** — Participants review desired outcomes of forum.
- Starter Video** — The starter video sets the tone for the discussion.
- Personal Stake** — Connect the issue to people's lives and concerns.
- The Deliberation** — Participants examine all the choices.

65% for Deliberation

20% for Ending the Forum/Study Circle

- Ending the Forum** — Reflect on what has been accomplished.
- Questionnaire** — Participants complete questionnaire.

NIF Forums and Study Circles

Why Are We Here? What Are We Going to Do?

We are here to move toward a public decision or CHOICE on a difficult issue through CHOICE WORK.

How Do We Do It?

Through a deliberative dialogue in which we:

- Understand the PROS and CONS of each approach, its BENEFITS, DRAWBACKS & TRADEOFFS.
 - Know the STRATEGIC FACTS and how they affect the way the group thinks about each option.
 - Get beyond the initial positions people hold to their deeper motivations — the things people consider to be most valuable in everyday life.
 - Weigh carefully the views of others; appreciate the impact various options would have on what others consider valuable.
 - WORK THROUGH the conflicting emotions that arise when various options pull and tug on what people consider valuable.
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How Can We Know If We Are Making Progress?

By constantly testing your group:

- Can your group make the best case for the approach least favored?
 - Can it identify the negative effects of the approach most favored?
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FOR MORE INFORMATION

To order the *The New Science of Food* issue book and starter tape call 800-600-4060, fax 937-435-7367 or mail to National Issues Forums publications, P.O. Box 41626, Dayton, OH 45441.

Moderator guides and forum posters are also available.

Other tapes may be ordered by calling Kendall/Hunt at 800-228-0810.

For other information and comments, visit the NIF Web site at nifi.org or call NIF Research at 1-800-433-7834.

To post the dates and locations of your forums, E-mail: forums@nifi.org.

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Moderator Response

After the forum, please complete this brief response sheet and return it with the questionnaires from the forum.

Moderator's Name _____

Phone _____ **Date and location of forum** _____

Briefly describe the audience of your forum including city and state, diversity, age of participants, number of participants.

What elements of this issue seemed most difficult to the participants?

What common concerns were most apparent?

Were there tradeoffs most participants would accept? Describe.

Were there tradeoffs most participants would not accept? Describe.

Did the group identify shared directions for action?

Return with questionnaires to:

National Issues Forums Research

100 Commons Road, Dayton, Ohio 45459-2777

www.nifi.org

The New Science of Food: Facing Up to Our Biotechnology Choices In Your Community . . .

Please share a story that illustrates how well, or poorly, your community is served by the local media.

Can you think of ways to improve local news coverage?

Can you think of an instance in which citizen action has had an effect on the media that serve your community?
