

# **PROPOSAL FOR**

## **FOOD SAFETY EDUCATIONAL CAMPAIGN IN MINNESOTA SCHOOLS: ACCEPTANCE OF IRRADIATED GROUND BEEF**

**Presented by**

**Minnesota Department of Children, Families & Learning  
Food and Nutrition Service**

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**PROPOSAL FOR**  
**FOOD SAFETY EDUCATIONAL CAMPAIGN**  
**IN MINNESOTA SCHOOLS:**  
**ACCEPTANCE OF IRRADIATED GROUND BEEF**

**OUTLINE**

- I. PILOT PROPOSAL GOALS**
- II. BACKGROUND AND RATIONALE**
- III. IDENTIFICATION OF STAKEHOLDERS**
- IV. IDENTIFICATION OF PILOT PARTNERS**
- V. RECRUITMENT OF PARTICIPATING SCHOOL DISTRICTS**
- VI. PILOT PLAN**
  - **Phase 1: Educational Campaign**
  - **Phase 2: Introduction of Irradiated Ground Beef**
- VII. EVALUATION PLAN**
- VIII. DOCUMENTATION OF PROTOTYPE MATERIALS**

**Appendix A: TIMELINE**

**Appendix B: BUDGET**

## **I. PILOT PROPOSAL GOALS**

Minnesota is requesting approval to pilot an educational campaign and the introduction of irradiated ground beef in select school districts during the 2002-2003 school year. The goals of this pilot are:

- 1) To increase the awareness and understanding of the benefits of food irradiation to improve food safety. If the results of the educational campaign are positive, schools administrators will have the opportunity to introduce irradiated commodity ground beef in their school lunch program.
- 2) To produce a prototype for other schools and state agencies to use when irradiated commodity ground beef is an available option from the U. S. Department of Agriculture.

## **II. BACKGROUND AND RATIONALE**

### **Background**

Historically, technology has improved the quality, safety and nutritional value of our food. Food irradiation is one of the most recent additions to increasing food safety, following the current technologies of canning, freezing, drying, heat pasteurization and proper cooking. Food irradiation has a history of scientific research, evaluation, and testing of over 50 years – more extensively studied and examined than any food technology in history. More than 40 countries around the world have approved the process. Numerous national and international food and health organizations and professional groups endorse or support food irradiation.

Irradiation kills bacteria and parasites that can cause disease in humans. Irradiation can drastically reduce the presence of organisms that can cause meat and produce to spoil – as well as organisms that are potential disease-causing agents like salmonella, campylobacter, and E. coli O157:H7.

The Center for Disease Control and Prevention reports that in the United States, foodborne infections cause an estimated 76 million cases of illness, 323,000 hospitalizations and up to 5000 deaths annually. Despite many improvements in food technology and decades of increased public health activities around the issue of food safety, current data on the incidence of gastrointestinal illness in the United States suggests that we still have an unacceptable level of foodborne pathogens in our food supply. In fact, the foodborne illness problem may be growing larger with the discovery of new emerging foodborne pathogens. Irradiation is recognized by the food industry as an effective tool in helping to control foodborne pathogens, as well as part of a comprehensive program to enhance food safety.

## The Minnesota Connection

Minnesota is a leader in promoting and using irradiated ground beef.

- In June 1999, the Food Irradiation: Minnesota Steps Forward conference provided over two hundred public health staff, food industry representatives, academics, and others involved with ensuring the safety of our food supply with the tools to educate their communities about irradiated food. The conference goal was to prepare these professionals with information and resources to prepare their communities to welcome irradiated food as an important food safety measure.
- In May 2000, a Minnesota processor, Huisken Meats, was first to market frozen irradiated ground beef to retail customers.
- Huisken BeSure frozen irradiated beef patties are now in 3500 stores in over 30 states.
- Irradiated ground beef patties are the only beef patties served at Xcel Energy Center suites during Minnesota Wild hockey games.
- Schwan's, the nation's largest direct-to-consumer food delivery service, has marketed irradiated beef patties nationwide since May 2000.
- In February 2002, International Dairy Queen (IDQ) became the first national quick-service restaurant chain to introduced irradiated ground beef patties. IDQ plans expansion of this pilot to all 150 Minnesota stores by the end of 2002.
- IDQ partnered with SureBeam Corporation, the Minnesota Beef Council and governmental agencies in the development of their pilot program.

The Minnesota Department of Health (MDH), the Minnesota Department of Agriculture and the University of Minnesota actively promote food irradiation. MDH reports the following statistics for foodborne illness:

- From 1997 to 2001, over 11,000 cases of culture-confirmed foodborne illness diseases were reported to MDH. That number includes:
  - over 5,000 cases of campylobacter infection
  - over 1,000 cases of E. coli O157:H7 infection
  - over 3,000 cases of salmonella infection
  - over 2,000 cases of shigella infection
- The E. coli infections reported to MDH between 1997 and 2001 included 80 cases of hemolytic uremic syndrome (HUS). HUS is a severe, potentially life-threatening complication of E. coli infection, primarily affecting very young children. People with HUS typically require

hospitalization in an intensive care unit and hemodialysis treatment, and the illness can cause permanent kidney damage.

- Since most people never seek medical attention for foodborne illnesses, and because most of them may not even be aware that their symptoms were possibly caused by contaminated food, only a small fraction of all food-related illness is actually reported to MDH.

### **The Minnesota School Connection**

- Food safety and serving quality USDA commodities is a top priority for Minnesota schools.
- Children are especially vulnerable to foodborne diseases that could be fatal or mean lifelong health problems. In March 2000, 18 children became sick in an E. coli O157:H7 outbreak at a Minneapolis parochial school. MDH reported the cause as an undercooked hot dish containing ground beef, pasta and tomato sauce. Six students had confirmed infection by the E. coli O157:H7 strain. Two of those sickened had to be hospitalized; all recovered.
- In March 2000, the Minneapolis Star-Tribune questioned the safety of the school lunch program in an investigative report.
- In December 1999, the U.S. Department of Agriculture (USDA) approved a rule allowing processors to use a process called irradiation to rid red meat of bacteria, including E. coli.
- The Farm Security and Rural Investment Act of 2002, signed into law on May 13, 2002, allows the use of technology to improve food safety.

### **Rationale**

Children, the elderly and those with weakened immune systems are especially vulnerable to foodborne illness. Food irradiation can provide an additional tool in providing safe USDA commodity ground beef to Minnesota schools and students. Minnesota has the support of numerous partners from professional associations, governmental agencies, industry and health care to pilot education and the introduction of irradiated ground beef.

Currently, USDA provides commodities, including ground beef, to participating schools. Until now, USDA is not using food irradiation on commodity ground beef, although USDA approved the use of food irradiation in 1999. A 1998 USDA study: Sampling Programs for the Contamination of Cattle Carcasses and Ground Beef, shows E. coli O157:H7 contamination in almost 80% of ground beef. Although proper handling and cooking will kill E. coli, irradiation will kill the pathogens in the ground beef before delivery and add an extra level of safety to the product.

**Utilization of USDA irradiated ground beef could be one part of an effective food safety program for Minnesota schools.**

**The school community needs accurate information from experts about food irradiation. Small, but vocal advocacy groups promote a number of myths about food irradiation, resulting in consumer confusion and misunderstanding about its safety. As a point of fact, similar fears existed when milk pasteurization began.**

**Some surveys indicate that the public is uncertain about the safety of irradiated meat due to a lack of knowledge. Dr. Christine Bruhn, Director, Center for Consumer Research at University of California-Davis is an expert on irradiation. Her research has shown that once people understand the irradiation process and learn about the endorsements of irradiation by health professionals, people are usually interested purchasing the irradiated products. She points out that the American Medical Association, the American Dietetic Association, the World Health Organization and many other groups have endorsed meat irradiation as safe and effective.**

**Surveys conducted in mid-2000 by MDH show that the majority of Minnesota consumers are concerned about food safety, primarily improperly cooked and stored food, salmonella and E. coli. Sixty-five percent of consumers were concerned or very concerned about E. coli and women were more concerned than men.**

**Consumer studies have shown that effective educational programs can positively influence consumer-purchasing behaviors of irradiated meat. Other marketing studies clearly demonstrate that many consumers prefer irradiated food and will select it over non-irradiated when given the opportunity.**

**Education of the school community – including school administrators, food service workers, parents, and students – is critical. Education plays a key role in efforts toward:**

- assurance that the school community makes choices based on good science and appropriate risk/benefit considerations which reflect the values of the local community.**
- successful introduction of irradiated ground beef in schools.**
- protection of the health and well-being of these consumers.**

**A successful outcome of the educational campaign will be the acceptance and introduction of irradiated ground beef by select school districts. The Minnesota Department of Children, Families & Learning, Food and Nutrition Service (CFL-**

FNS) has formed a collaboration with several state agencies and allied groups who are supportive of this pilot project.

### **III. PROJECT STAKEHOLDERS**

CFL-FNS will solicit three Minnesota school districts to participate in this project. The stakeholders from those districts involved include:

1. School boards
2. School administrators
3. School staff
4. Parents and students
5. Advocacy groups

### **IV. PILOT PARTNERS**

The following state agencies and allied groups have agreed to collaborate with CFL-FNS on the pilot:

Minnesota Department of Health  
Minnesota Department of Agriculture  
Minnesota Governor's Food Safety Task Force  
University of Minnesota Extension Service  
Minnesota School Food Service Association  
School Food Service Directors of Minnesota  
Minnesota Beef Council  
SureBeam Corporation  
International Dairy Queen Corporation

Potential groups that may be interested in supporting the pilot project include:

- Professional associations
- Government entities
- Food industry
- Health care

## **V. RECRUITMENT OF PARTICIPATING SCHOOL DISTRICTS**

CFL-FNS will attempt to recruit three public school districts to participate in the pilot. The following criteria will be used in selecting and recruiting school districts:

- One small size school district located in a rural area with limited a media market.
- One medium size school district located in a rural center city with a secondary media market.
- One small to medium size school district located in the eleven county Twin Cities metropolitan area with a major media market.

## **VI. PILOT PLAN**

### **PHASE 1: Educational Campaign**

The educational campaign should (but not necessarily be limited to):

- A. Create a workgroup with education experts from pilot partner organizations and groups.
- B. Recruit participating school districts.
- C. Conduct an assessment of various stakeholder groups to identify the issues and knowledge base.
  - Review and analyze national, state and local data to identify consumer issues and understanding related to irradiated ground beef.
  - Conduct sample surveys, focus groups, etc. to assess pilot stakeholder issues and understanding related to irradiated ground beef.
- D. Design an educational campaign
  - Determine multiple methods for reaching target audiences.
  - Provide science-based information about the benefits, risks and amount of study conducted regarding food irradiation. Address the myths about food irradiation. Provide information about foodborne illness and food safety.
  - Review and assess existing educational materials.
  - Modify existing materials and create new materials, if needed.
  - Translate educational materials as needed.



- Develop presentation targeted to school community – school administrators and staff, parents and students.
- Include educational materials for faculty to utilize in the classroom and provide to all students.
- Develop public relations tools for the local school districts, (talking points, FAQs, etc.)
- Develop plan to provide access to experts to answer questions.
- Develop press strategy to mitigate negative publicity or potential misinformation disseminated by advocacy groups.

**E. Conduct an educational campaign**

- Solicit the support of local health professionals.
- Identify local and state partners to participate in the delivery methods.
- Identify local professionals who attended the 1999 Food Irradiation Conference.
- Distribute educational materials to school community.
- Utilize educational materials that have been identified appropriate for schools.
- Conduct presentations and educational forums to the school and local community.
- Conduct educational activities in the classroom and cafeteria.
- Deploy press strategy with local media, if needed.

**F. Evaluate effectiveness of an educational campaign (refer to VI. Evaluation Plan)**

***At the conclusion of the educational campaign, local school districts will be given the option to participate in Phase 2 of the pilot and introduce irradiated ground beef products in their school lunch program.***

**PHASE 2: Introduction of Irradiated Ground Beef Products**

The introduction of irradiated ground beef products should include (but not necessarily be limited to):

- A. Create workgroup, including CFL-FNS nutritionists, local food service directors and staff, beef industry representatives and members from other groups.**

- B. Determine method for providing irradiated commodity ground beef to pilot schools. CFL-FNS will solicit industry support for the irradiation of commodity ground beef, determine logistics for treating the product, and coordinate the delivery of the product to the school districts.
- C. Design menus to incorporate irradiated commodity ground beef recipes as an entree choice for school lunch. Pilot partners will assist school district staff in serving the product by:
  - reviewing existing menus.
  - modifying menus, if necessary, to include irradiated ground beef entrees as menu choices.
  - responding to questions regarding food preparation and food safety.
- D. Design communication tools to inform stakeholders about the use of irradiated ground beef in the school lunch program. Pilot partners will work with school districts to determine and implement appropriate communication methods, such as notifications on menus, announcements, point of sale signage, posters, etc.
- E. Deploy press strategy with local media before introducing irradiated ground beef into the school lunch program.
- F. Introduce irradiated ground beef into the school lunch program.
- G. Evaluate effectiveness of implementation plan for introducing irradiated ground beef (refer to VI. Evaluation Plan)

## **VII. EVALUATION PLAN**

An independent contractor will perform the evaluation component for the pilot. An additional independent contractor will assist to execute the evaluation data collection including facilitation, and technical writing. CFL-FNS will manage the contracts and use the following standard procurement process:

### **INDEPENDENT EVALUATOR**

- A. Prepare a Request for Proposal to contract for evaluation services.
- B. Select contractor.
- C. Execute contract, including Statement of Work.
- D. Require evaluation report as a deliverable.

**Contractor will be required to perform the following activities:**

- **Determine methods for collecting data, such as surveys, telephone interviews, focus groups, etc.**
- **Conduct pre- and post-tests of stakeholder understanding and opinions.**
- **Determine, if possible, which educational tools were more effective at effecting acceptance of irradiated ground beef.**
- **Evaluate the effect of serving irradiated ground beef on student perception and participation.**
- **Evaluate the effectiveness of the press strategy.**
- **Measure the cost at the local level for conducting local campaign.**
- **Prepare written report of findings.**

#### **INDEPENDENT FACILITATOR / TECHNICAL WRITER**

- A. Prepare a Request for Proposal to contract for evaluation services.**
- B. Select contractor.**
- C. Execute contract, including Statement of Work.**
- D. Require prototype materials as a deliverable.**

**Contractor will be required to perform the following activities:**

- **Conduct pre-assessment focus group sessions**
- **Summarize pre-assessment findings**
- **Document pre-assessment results**
- **Assist with phone surveys**
- **Collect and assess evaluation for participants**
- **Produce prototype materials**

#### **VIII. DOCUMENTATION OF PROTOTYPE MATERIALS**

**Prototype materials will document (but not necessarily be limited to):**

- A. Successful strategies for forming food safety partnerships at the state and local level.**
- B. Successful strategies for conducting a food safety educational campaign for acceptance of irradiated ground beef.**
- C. Successful strategies for introducing irradiated ground beef into the school lunch program.**
- D. Successful press strategies for mitigating negative publicity.**

## **Appendix A: TIMELINE**

This proposal has an aggressive timeline. The educational campaign, product introduction and evaluation will occur during the 2002-2003 school year as follows:

<b>September 30, 2002</b>	<b>Submit Revised proposal to USDA – Food and Nutrition Service</b>
<b>October 2002</b>	<b>Select Work Group of Partners to develop education Campaign</b>
<b>October 2002</b>	<b>Recruit and select school districts for pilot</b>
<b>Mid-October 2002</b>	<b>First workgroup meeting – Begin development of Educational campaign (outline)</b>
<b>November 2002</b>	<b>Pre-Assessment of stakeholder issues (focus groups &amp; surveys)</b>
<b>December 2002</b>	<b>Finalize educational campaign and training materials</b>
<b>January 2003</b>	<b>Educate State-wide school foodservice professionals, industry partners, and school board association members (some school administrators) at Minnesota's Food Expositions in Fargo, ND and Minneapolis, MN. [Apply press strategy before each Food Exposition]</b>
<b>Jan-March 2003</b>	<b>Conduct training in the three pilot school districts according to the training schedule (complete one district before moving to the next and apply press strategy before each district)</b>
<b>Feb-April 2003</b>	<b>Conduct post-assessment to evaluate educational campaign at each of the three districts; including parents, school staff and students.</b>
<b>March-April 2003</b>	<b>Offer irradiated beef to participating school districts</b>
<b>April 2003</b>	<b>Evaluation of student perception and participation</b>
<b>June-July 2003</b>	<b>Complete pilot evaluation and produce report Produce prototype materials</b>

**Appendix B: BUDGET**

**DIRECT CHARGES**

Salaries	\$ 52,819
Project Consultant (1 FTE)	13,205
Fringe Benefits (25% of Salary)	
In-State Travel	1,000
Graphic Design/Printing	16,100
Supplies, Materials	500
Professional and Technical Services	50,000
<b>TOTAL DIRECT</b>	<b>\$133,624</b>
<b>INDIRECT CHARGES</b>	<b>\$ 17,621</b>
<b>TOTAL BUDGET</b>	<b><u>\$151,245</u></b>

The Minnesota Department of Children, Families & Learning is requesting funding for all budgeted expenses.