

AGENDA, OBJECTIVES, AND PROCEDURES FOR THE WORKING GROUP

OBJECTIVES

The objectives of the working group will be to:

1. Identify those technologies with the highest probability of development and adoption.
2. Identify those technologies most likely to

raise substantive policy issues for Congress.

3. Identify, in detail, the severity of impacts, the groups most affected by the impacts, and the issues arising from these impacts.

ORGANIZATION AND METHODOLOGY

For the initial session on October 12, the working group will meet together. For part of the session on October 13, the working group will be divided into two sections, one on processing and packaging and the other on food distribution, including wholesaling, retailing, food service, and transportation.

October 12, 1977

6 to 7pm. Orientation meeting, with a brief explanation of the Office of Technology Assessment and presentation of the objectives and procedures for the working group.

October 13, 1977

Session 2: 8 to 11 a.m. The processing and packaging, and distribution subgroups will meet in separate sessions. Each group will be given a list of technologies for their assigned area of work and spend approximately an hour discussing the technologies and socioeconomic factors, clarifying questions, and adding information. The positive or negative effect of a selected number of socioeconomic

factors on the technologies will be evaluated under two different scenarios. The group will then give their estimate of the probability of development and adoption of each technology by 1985 and the year 2000 for each scenario. This information will be used to select the technologies with the highest probability of emerging by 1985 and 2000.

Materials supplied: a) background paper, b) Worksheet A, and c) two scenarios of socioeconomic factors.

Session 3: 12:30 to 2:30 p.m. The two subgroups, meeting separately, will make a cursory study of the impacts and issues for each technology. There will be group discussion and interaction, then the subgroups will use Worksheet B to score the technologies based on the expected positive and negative impacts and issues the technologies are expected to raise.

Materials supplied: a) background paper, and b) Worksheet B.

Session 4: 3 to 6 p.m. The working groups will meet together and will consider those

technologies from processing and distribution which have been selected as the most likely to emerge based on previous work by the subgroups. The group will discuss in detail the expected impacts and issues for each technology. Worksheet C will serve as a guide for this discussion.

Materials supplied: a) background paper, b) priority list of technologies based on probability of emergence, and c) Worksheet C.

October 14, 1977

Session 5: 8:30 a.m. to 12:30 p.m. The working group will be given two lists of technologies, one on processing and packaging and the other on distribution. These will be the technologies ranked by the subgroups as having the greatest impacts and raising the most substantive issues. Some of these technologies may have been discussed in the previous session if they were also the ones with a high probability of emergence. Using Worksheet C, the group will discuss the impacts and issues for each technology.

Materials supplied: a) background paper, b) list of technologies ranked by expected issues, and c) Worksheet C.

Attachment to Worksheet A: Scenario 1

This scenario projects socioeconomic factors that would show no major shocks either economically or socially and is the kind of socioeconomic environment expected if things continue to evolve much as they have in the past 25 years.

Energy and Raw Materials. The cost of energy will remain about the same relative to other costs. New sources of domestic oil will be discovered, and other energy sources will be developed. Our dependence on foreign oil will be decreased slightly, and imports of oil will not continue to grow as in the past. Shortages of other raw materials will be transitory in nature and will not cause major disruptions in the economy.

Demand for Food Domestic and foreign demand will not cause an unusual rise in food prices. There will be a continual demand for convenience foods in this country. Demand

for beef, poultry, and other meats will increase less rapidly than in the past but will probably increase,

Supply of Food. The supply of food from traditional agriculture will be adequate, although there will be new products introduced in response to changes in price of food from traditional sources. These new products or ingredients will still be from traditional sources, augmented to a small degree from unconventional sources.

Health Concerns. There will be an increased awareness of the relationship between nutrition and health, and this concern is expected to influence eating patterns. The major concern will be over food additives, and this will be reflected in careful consideration of processed foods and foods fabricated from new ingredients.

Regulations. Regulations regarding the testing and approval of food ingredients will remain essentially as they are now. The Delaney amendment will be the guide for approving new additives. Regulations regarding transportation will remain essentially the same, although there will be changes that will allow for increased efficiency. Efforts will continue to curb pollution of the environment.

Changing Lifestyles.

- Older persons will make up a larger percent of the population.
 - People will retire at an earlier age.
- The proportion of working wives will remain the same as at present.
- people will have more leisure time.
- Away-from-home eating will continue to increase.
- The family will remain the basic social unit, but there will be fewer meals prepared in the home, and the family will eat together less often.

Economics.

- Real median family income (yearly):

1975:	\$14,000
1985:	20,000
2000:	25,000

- Inflation rate: 5 percent per year.
- Consumers will have more disposable income and more income for discretionary use.

Industry Structure. Structure refers to size and number of firms, market shares, and coordination among firms in an industry. The current trend toward fewer and larger firms in the food industry will continue.

Other Institutions. Labor's influence regarding the development and adoption of technologies increases.

Attachment to Worksheet A: Scenario 2

Changes depicted for the socioeconomic factors in this scenario would be expected to have more influence on the development and adoption of technologies up to the year 2000 than those in Scenario 1.

Energy and Raw Materials. The cost of energy will increase substantially relative to other costs. Additionally, the supply of foreign oil and other strategic raw materials will be subject to periodic disruption for political, economic, and other reasons. Our dependence on imports of oil will increase, and the need to export agricultural materials to help decrease the deficit in our balance of payments will increase.

Demand for Food. Foreign demand for food will increase, causing domestic food prices to increase to the extent that alternative food forms and sources will be needed to augment the supply. The demand for convenience foods will continue in the face of rising prices. The per capita consumption of beef and pork will decline slightly.

Supply of Food. New sources of food from nontraditional sources will be developed. Traditional agriculture will be the main source but will not be sufficient to keep prices at acceptable levels. Methods will be sought to better utilize available food supplies.

Health Concerns. Consumers are concerned over nutrition and food safety but are willing to accept small risks and to use more processed foods and foods fabricated from new ingredients.

Regulations. Regulations regarding the testing and approval of food ingredients, including additives, will change. Food ingredients will be judged on the basis of benefits as well as injurious effects. Regulations regarding transportation will be changed so that maximum efficiencies may be achieved. Efforts to curb pollution will be slowed, and lower standards will be accepted.

Changing Lifestyles.

- Older persons will make up a larger percentage of the population.
- Retirement age remains the same as at present.
- The proportion of working wives will increase.
- In addition to the traditional eating establishments, central facilities will be located in neighborhoods where meals may be eaten or taken home.
- Families will prepare and serve their meals on an individual basis, either by buying them at central preparation facilities or as convenience foods from retail outlets.

Economics.

- Real median family income (yearly):

1975:	\$14,000
1985:	18,000
2000:	21,000

- Inflation rate: 7 percent per year.
- Consumers will have a lower percentage of their disposable income for discretionary use.

Industry Structure. Food industry structure will be under close scrutiny by the Federal Government, resulting in less concentration,

Other Institutions. Labor's influence regarding development and adoption of technologies lessens.

Attachment to Worksheet B: Explanation of Criteria for Determining Impact Scores

Short-Term Economic Effects. Short term would be up to 5 years after adoption of the technology. Refers to the net effect on employment, cost to the industry and to consumers, and other effects of a transitory nature. If both beneficial and harmful effects are occurring equally and at the same time, they should balance out. However, the negative impact may receive the greater weight, since, for example, the simple balancing of jobs lost and gained ignores the problems of dislocation.

Long-Term Economic Effects. Long term would include effects after 5 years from adoption and refers to the extent to which the technology will result in a net increase or decrease in the total quantity of economic goods and services produced in the long term. A favorable impact would generally reflect a more efficient utilization of resources, increased productivity of labor, or increased productivity of capital. An unfavorable economic impact would mean the contrary.

Effect on Quality of Life. Quality of life includes equity of income distribution, social mobility, diversity of opportunity and freedom of choice, the propensity of various groups to be cooperative or disruptive, and the general morale of society as a whole. Also included are improvements or declines in certain aspects of the standard of living such as convenience, variety, quality, etc. These are related to income and employment but are considered separately for assessment.

Effect on Quality of the Environment. Refers to externalities, or public and private disservices resulting from economic activities. Pollution, urban congestion, and worker safety are the major categories. For example,

if the technology increases the amount of pollution or congestion generated by production and/or consumption of the goods or services, it gets a negative score, or, conversely, a positive score if the opposite is true.

Effect on Nutrition and Food Safety. The direction and degree of impact on food safety by adoption of the technology. The score should reflect a judgment of the net effect. Nutrition refers to whether the nutritional quality of the food is increased or decreased, while safety indicates whether a technology would increase or decrease the safety of food.

Effect on Conservation of Resources. This measures the net effect of the technology on resources, especially energy and others in critical supply. This would include efficient use of nonrenewable resources plus substituting renewable for nonrenewable resources, such as packaging material from cellulose instead of petroleum products.

Worksheet C: Guide for Assessing the Impacts and Issues From Adoption of Technologies

The following guide is presented in matrix form to show the possible impact of a technology adopted in one sector of food marketing over the whole system and extending to other primary segments of society and secondary or more long-term effects that should be considered. The major purpose of the guide is to assure that as many issues and impacts as possible will be covered in the time allowed. Additional impacts and issues may emerge and be added to those listed as the technologies are discussed.

The guide sheet may be used initially to check the important impact areas. The group discussion will **then** bring out the exact nature of the impacts and the possible issues.

WORKSHEET A- IMPACT OF SELECTED SOCIOECONOMIC FACTORS ON NEW TECHNOLOGIES

SCENARIO #

Session No. 2

	SOCIOECONOMIC FACTORS											
	Energy and Raw Materials	Demand for Food	Supply for Food	Health Concerns	Regulations	Changing Life Styles	Industry Structure	Other Institutions	Probability of Occurance by 1985		Probability of Occurance by 2000	
									Development	Adoption	Development	Adoption
	- 0 +	- 0 +	- 0 +	- 0 +	- 0 +	- 0 +	- 0 +	- 0 +				
1.												
2.										I		
3.												
4.												
5.												
6.												
7.												
8.												
9.												
10.												
11.												
12.												
13.												
14.												
15.												
16.												
17.												
18.												
19.												
19.												
20.												

DIRECTIONS:

WORKSHEET B—EXPECTED IMPACTS OF THE TECHNOLOGIES

Impacts*	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
TOTAL																					
NEGATIVE																					

Directions for Scoring—Score each impact on a +3 to -3 scale for each technology.
 A zero would indicate a balancing of the positive and negative impacts or no impacts expected.

*See attached explanation ...

WORKSHEET B—EXPECTED IMPACTS OF THE TECHNOLOGIES

(Continued)

Impacts*	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	3	38	39	40
TOTAL																				
NEGATIVE																				

Directions for Scoring—Score each impact on a +3 to -3 scale for each technology.
 A zero would indicate a balancing of the positive and negative impacts or no impacts expected.

*See attached explanation.

Technology No. _____

WORKSHEET C-IMPACTS AND ISSUES OF NEW FOOD MARKETING TECHNOLOGIES

FOOD MARKETING SEGMENTS

Effects	Processing	Packaging	Wholesaling	Retailing	Food Service	Transportation	Consumers
	Impact , Issue	Impact , Issue	Impact , Issue	Impact , Issue	Impact , ISSUE	Impact , Issue	Impact , Issue
<u>Economic Effects</u>							
Scale							
Location							
Employment							
Demand for Food							
supply of Food							
<u>Quality of Life</u>							
Workers Safety							
Structures and Institutions							
<u>Quality of Environment</u>							
Pollution							
<u>Nutrition and Food Safety</u>							
Product Quality							
Nutrition							
Safety							
<u>Conservation of Resources</u>							
Energy			#				
<u>Other</u>							