



Technological Trends Affecting Families

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"Thinking is the talking of the soul with itself."
--Plato

TECHNOLOGICAL TRENDS AFFECTING FAMILIES IN FOODS & NUTRITION

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The Technological Trends Affecting Families in Food and Nutrition is an extremely broad subject involving directly or indirectly the products of labor that have brought about changes in man's total environment - physical, social and cultural.

Man's physical environment to a large degree determines what he has to eat. The rainfall, temperature and soil type affect directly or indirectly the kind and amount of crops that can be grown for food.

The type food grown determines the labor required and the yield from labor. One man working for one day can produce enough wheat to furnish him with sufficient calories for one year. If he grew beans it would take 40 days and 3 acres; beef 40 days and 20 acres. Green and yellow vegetables are not grown and eaten in population pressure areas because of their low calories and poor keeping qualities. Therefore diets low in vitamin B₂ or riboflavin, vitamin A and ascorbic acid or vitamin C are found in many parts of the world.

Fortunately we live in a country where science and technology have made varied diets possible. As the population increases food problems are created. The population in the United States has more than doubled since 1900 and the prospects for 1965 are that there will be 200 million people in this country at that time. It is estimated there will be 20 million people in this country 65 years old and over by 1975. Nutrition has played its part in increasing this life expectancy.

Studies of how Americans eat are becoming more and more numerous. They generally agree that teen-age girls are the most poorly nourished group and their mothers are next. Men and boys eat more and better. This is of great concern to doctors and nutritionists because they believe it may account for many of the problems that arise during pregnancy and its effect on the health and vigor of the children they bear.

Poor food habits are not just the situation among girls and women in Kalamazoo or some other far away place, but right here in North Carolina among home demonstration club women. Studies showed that only 1 out of 5 ate some of all the recommended food groups. The foods most often neglected were milk, fruits and vegetables. Seven out of 10 failed to consume the recommended pint of milk daily. Only 3 out of 10 ate the recommended 5 servings of fruits and vegetables daily.

The science of nutrition - has developed within the lifetime of most of us in this room. Gail Borden discovered how to condense milk and prevent

its decomposition. Through technology the manufacture and distribution of enumerable cans of milk has saved the lives of millions of babies. The discovery, isolation and manufacturing of vitamin D made possible its addition to milk. This has virtually wiped out rickets which at one time was widespread.

The discovery and synthesis of the B vitamins - thiamine, riboflavin, and niacin - paved the way for a process to enrich staple products of diet made from flour, corn and rice. As a result pellagra and beri-beri are becoming medical history instead of everyday occurrences, in countries where these products are enriched.

With this longer life has come dramatic changes in standards of living. Science has set into motion forces which change the way we live.

The work week has dropped from 65 to 40 hours a week. Workmen are paid more now for one hour than they were for 12 in 1850.

Ninety-four percent of the energy for work was supplied by men and animals 100 years ago. Now it has dropped to about 6 percent. Steam, gas, electricity and atomic energy produce the energy that runs many labor-saving devices used today.

Greater educational opportunities are now available than ever before. A century ago education was for the few with 1 in 16 receiving schooling beyond grammar grades; 1 in 30 attended college. Today 60 per cent graduate from high school and 25 percent of college age are enrolled in institutions of higher education. Also there is a great increase in the number who continue some type of education through adult life.

The application of science to farming has revolutionized it. Between 1947-57 alone farm production went up 18 percent. Milk production has risen 23 percent since 1940. Through increased production, improved processing and distribution methods, a milk of good standard quality that tastes good and is safe to drink has been made available to remote corners of the earth either in a fresh, canned, or dried form.

The 50 percent increase in per capita consumption of canned foods in the past 15 years is attributed to not only improved processing methods, but improvement in the raw product. Research has produced new types and improved strains of crops with improved flavor and appearance such as the new types of hybrid sweet corn with smaller cobs that take up less space in cans or freezers; stringless green beans; sweet potatoes with higher vitamin A value; cling peaches that combine deep flesh and smaller pits with deeper color and flavor; strains and varieties of tomatoes that resist wilt; introduction of new fungicides and insecticides to control diseases and insects; controls for fruit ripening; ways to predict accurately harvest dates for peas and

corn at ideal maturity for harvest so planting could be staggered and eliminate overcrowding canneries with peak loads.

The housewife has been delivered from many tasks of drudgery. Hundreds of mechanical servants help to lighten the load and make life more meaningful. "Built-in maid service" which she buys today at the supermarket is estimated at 6 billion dollars annually with food alone. Someone else has shelled the peas, mashed the potatoes, washed, cut up and sometimes even cooked the collards or whole TV dinners.

It is estimated that North Carolina farm families spend about \$27 million annually for food.

A study made in 1957 among home demonstration club women in North Carolina showed that 92 percent used some bought food the week prior to the study. Eight out of 10 bought some fruits and vegetables; 7 out of 10 bought some milk; 1/2 bought some eggs; 100 percent used some ready to serve, partially prepared bread or mixes. Studies show homemakers are spending less time in preparing meals. Five out of 10 spent less than 1 hour; 4 out of 10 spent 1 1/2 hours, and 1 out of 10 spent 2 or more hours.

Time saving methods they reported using as most helpful were: 5 out of 10 plan menus and shop ahead; 4 out of 10 used canned or frozen foods; 2 out of 10 preparing food in quantity for more than one meal.

Modern food processing methods - canning, freezing and packaging - transportation and refrigeration, linked with an increasing basic knowledge of foods and nutrition, have brought about a variety to the diet never before dreamed of.

Close to 1/2 of today's grocery products are items that did not exist 10 years ago or were available only in token quantities. Before World War II the average supermarket stocked 1,000 different items, by 1944 there were 3,500 and today more than 7,000.

Foods from China, Japan, Italy, Mexico and many other foreign countries, as well as a greater variety of foods from all parts of the United States are now available in some form the year round. These foods not only furnish new taste experiences and give greater variety to the diet, but act as a "leveler" to help us better understand the cultures of other people.

Widespread information on the prevention and control of disease has made us special diet conscious. Because of allergies, weight control or some special disease, low calorie, low sodium or low fat foods are found on many modern grocery shelves and served in many homes.

All of these technological changes making a greater variety of foods available, coupled with increased purchasing power, have resulted in improved

diets for the vast majority. In 1955 less than 10 percent of the families in the United States were classified as having poor diets, whereas, 33 percent were rated poor in the mid 1930's.

Social and cultural environment, as well as the physical, affect what we eat. Serving of coffee, tea or soft drinks as snacks have a social value although no protective food value. Some religions prohibit eating animal flesh, or pork or foods that are not specially treated.

A group of young business girls living at the Raleigh Y. W. C. A. would not eat breakfast. When questioned they said it was because they wanted to lose weight or were afraid of getting fat. They accepted this argument as unsound when they were given an account of scientific studies that showed a group of college girls in Iowa actually lost weight faster when they ate an adequate breakfast, than when they skipped breakfast. These girls then admitted what they ate for snacks during the morning break was higher in calorie value and much lower in protective food values than a good breakfast. Why did they still resist change? It finally boiled down to the fact that they couldn't afford to buy breakfast, also a snack at 10 o'clock when everyone met to socialize at the snack bar. Coffee, soft drinks, doughnuts and crackers was all they had to choose from.

Shorter working hours giving more leisure, with domestic help being replaced by labor-saving devices, has made a great impact on a more relaxed, informal way of living. One result has been a great interest in outdoor cooking as fun for the family and an informal way of entertaining friends.

Hobby cooking is also quite the vogue for men as well as women. This is not only because of the do-it-yourself era in which we live, but as a means of expressing creative ability. Hobby cooking is also used for entertaining or because of personal or family interest in trying new things, or learning more of the cultures of people in other centuries.

The search for new ways to process foods will be continued so that abundant foods of one season, or different parts of the world will be made available the year round. Some of those now being tested, but not yet proven satisfactory are:

1. Thermal processing using electric energy to rapidly heat food to sterilizing temperatures. This process has proven impractical because the food cannot be even partially packaged in metal containers and because it is so expensive.
2. Antibiotics added to foods as a preservative has been a great theoretical interest, since it was first demonstrated that they would stop the growth of certain bacteria. Hopes of adding these substances to canned foods to eliminate the heat process are somewhat fanciful now.

There is no experimental evidence to prove they would be practical and effective for widespread use.

Some antibiotics have been used successfully to prolong the shelf life of some fresh foods. Dressed chickens dipped in water containing aureomycin extended storage life 7 to 14 days. Subtilin and streptomycin extended the storage life of ground beef.

3. Freeze-drying of meat was found to be the best means of dehydrating meat without loss of quality. Reduction of weight and bulk by dehydration is very important in transporting food to all parts of the world by Army Quartermasters.

4. Sterilization by atomic energy is possible, but not always desirable. The amount of irradiation needed depends upon the type and number of spoilage organisms present and the type of food material. Work is being done to overcome change in flavor, color and texture that may be produced.

Exposure to irradiation does not destroy enzymes in fruits and vegetables. A heat treatment is required which in itself will preserve the food making exposure to atomic radiation unnecessary.

One promising use of ionizing radiation would be prolonged shelf life of fresh meats and vegetables. It is quite effective in preventing the sprouting of potatoes.

A prediction is that the American market will grow by leaps and bounds in terms of people and buying power. In a relatively short time our population is expected to exceed 200 million people with incomes that will permit wide discretion in what they will buy.

The largest increases are expected in metropolitan areas that already exist. Already overcrowded business districts and parking areas will demand a change in transportation and marketing practices. Some people think we might return to soliciting trade and ordering by telephone, or over the television or produce trucks traveling through residential districts.

With an increased number of homemakers going into the labor market and less and less domestic help available, the demand will increase for more and more convenience foods, and time and labor saving devices.

As transportation, food processing and preservation methods improve a greater variety of exotic foods from far away places will find their way to our tables. Or we might eat out more often, going to London, Paris, Rome or some distant places for dinner instead of a nearby cafeteria or restaurant.

We now have more convenience and luxuries with more time to enjoy them than ever before. We should not be, however, like the man who resigned his job in 1898 from the Patent Office in Washington because he thought it had no future as everything had already been invented. More and greater things are in store. We must be willing and ready to make changes. However, we must not change just for the sake of change. First develop a knowledge of all that is involved and the implications of side effects of changes needed. Lack of these will cause nutrition programs to fail.

Food can make a difference in the way you look, feel and act. Any nutrition program should be based on getting people to know and understand this fact, and that to eat better is to live better. Man is born to be free. With every improvement in living comes a little more assurance of freedom. May science and technology bring about an increasingly meaningful life here and throughout the world so that they can be spent in peace and freedom.

1957 STUDY OF

BUYING HABITS OF HOME DEMONSTRATION CLUB WOMEN IN NORTH CAROLINA

92% used some bought foods during the week - these included vegetables, fruits, meat, milk, cheese and eggs

Vegetables and Fruits

8 out of 10 used some bought fruits and vegetables

A higher percent of used fresh and canned fruits and vegetables than frozen or dried

Milk

7 out of 10 bought some milk

4 out of 5 used fresh milk (of those who bought milk)

1 out of 2 used canned milk (of those who bought milk)

1 out of 4 used dried milk (of those who bought milk)

Eggs

50% used bought eggs during the week prior to the study

Production

85% produced some food

1/4 produced no vegetables

Approximately 1/4 produced all beef used

1/3 pork and about 1/2 produced some poultry

Frequency of Home Baking

North Carolina homemakers still do a lot of home baking from original ingredients, however, 100% also used some ready to serve or partially prepared bread or mixes.

1/2 baked biscuits daily

1/4 baked cornbread daily

2 out of 3 made pies once a week or more

2 out of 3 made cakes once a week or more

Pies were made more often than cakes

Will the trend continue for farm families to produce less and buy more of the foods needed? What implications will this have for program planning?

SUMMARY OF DIETARY SURVEYS AMONG NORTH CAROLINA HOME DEMONSTRATION MEMBERS

Drinking Milk

Homemakers

4 out of 10 or 43% drank little or no milk

3 out of 10 or 28% drank 1 glass

3 out of 10 or 29% drank 2 or more glasses

Children

Less than 1 out of 10 or 8% had no milk

3 out of 10 or 34% had from 1 to 2 glasses

6 out of 10 or 58% had 3 or more glasses

Eating Vegetables

6 out of 10 or 63% ate 1 or more servings of green or yellow vegetables

7 out of 10 or 68% ate 1 or more servings of high vitamin C vegetable

6 out of 10 or 61% ate 3 servings of other vegetables

3 out of 10 or 31% ate a total of 5 servings

Increased consumption of milk, fruits and vegetables is needed for best of health. What programs and methods can we use to increase the consumption of these protective foods? Through: Producing? Purchasing? Preparation?

TIME SPENT PLANNING DINNER FROM

1957 U. S. HOME DEMONSTRATION CLUB WOMEN'S STUDY SUMMARY OF QUESTIONNAIRES FROM N. C. WOMEN TAKING PART

5 out of 10 or 55% spent less than 1 hour

4 out of 10 or 35% spent 1 1/2 hours

1 out of 10 or 10% spent 2 hours

TIME SAVING METHODS USED IN FOOD PREPARATION

5 out of 10 or 48% plan menus and shop ahead

4 out of 10 or 44% said that using canned or frozen foods saved time

2 out of 10 or 22% saved time by preparing food in quantity (more than enough
for one meal)

As more women go to work outside the home and more convenience foods and labor saving devices become available, how can we reach and help families to plan, prepare, serve and eat attractive nutritious meals for the whole family.

Food packaged for convenience does not always have the same quality and food value as the original. How can we help working women, who need more help - not less - to buy and prepare foods with discrimination keeping within the time and money they have to spend for food?

HOUSING AND HOUSE FURNISHINGS

Pauline E. Gordon and Mrs. Edith B. McGlamery

A candid look at the housing situation shows that since 1950 the number of dwellings in the United States has steadily increased - 55.3 million in 1956. That is about 9 million more than in 1950. Seventy-five per cent of the homes that existed in 1950 have made some such change as: addition of a room, installation of water, heat or light, remodeled kitchen, utility room, etc. These estimates are based on a housing inventory done late in 1956 by the Census Bureau.

Over 3 million dwellings were lost by one means or another between 1950-1956 - fire, storm, or torn down by the owner. In the actual number of dwellings built, the South topped the list with 3.8 million compared with 2.4 million in other regions.

We would like to ask you these questions: What changes are taking place in your counties? Is there an increase in number of new houses being built? Are houses being remodeled? Are conveniences such as water, heat and light being added?

THE SECOND QUESTION I would like to ask: Who is occupying the dwellings being built?

In the study 54 per cent of the dwellings built are being occupied by their owners. This is an overall figure. From observation and request for assistance coming to our office, I would think that the greater majority of new rural homes in North Carolina are being occupied by the owners. The number of non-farm rural homes are increasing. From reports of the decrease in farm tenants, it is natural to assume that there is more and more of the tenant houses being abandoned.

THIRD QUESTION: What size houses are being built?

The 1956 National Housing Inventory states that in general families are better off in regard to space. Fewer families are living in three rooms or less. Based on requests from N. C. Extension Service for assistance and plans in housing there has been an increase in homes with two living rooms - parlors and a family room, utility or workroom, three bedrooms, and at least one bath and often two.

Homes in the Northwest and West are the most adequate in regard to facilities: piped running water, hot water, flush toilets, tub or shower.

The South started at the lowest level and made the greatest relative gain between 1950-1956.

It would be worthwhile for each county or even each community to know how well equipped their homes are with these facilities. As well as many other phases of housing, such as painting, adequate household furnishings and equipment, storage, eating space and furnishings for gracious dining, etc.

FOURTH QUESTION: What do you consider the objectives or goals for housing?

A house to become home must be built and furnished so that the atmosphere created is for the enjoyment of the family. That is, Father, Mother, children, and any other person living within the home. Quoting from the McCalls Second Annual Congress on Better Living - In a home "the family comes first." People really know that a family lives there on entering a home. Therefore, the objective for housing and home furnishings should be Better Homes for Better Families.

We will grant that people are building new homes, remodeling and furnishing them, but what about the problems facing them. One of the problems is money. The value of homes is considerably higher now than in 1950. This is due partly to the upgrade in quality and partly to the increase in the price load. Therefore, families must face these questions: Is the home a wise investment? To build or not to build? If money has not been saved for the home, where should we borrow it? Therefore, families should be well informed on:

1. Mortgages
2. Different kinds of insurance for home owners
3. Installment buying
4. Sources of lending agencies and their interest policies.

Housing is a long-time expenditure. Families need clear understanding of financial problems involved.

A SECOND PROBLEM: Families are faced with the problem of knowing what they want in a house before they start building. Too often we hear "If I could build over I would - ". Evaluating the family's housing needs is important. Adjusting money, wants, and needs is important.

A THIRD PROBLEM: The selection of building material. Twenty years ago timber, brick, stone, nails, hardware, window glass, and oil paint were the materials that we used. Today what a change in the selection of building

material. Man-made roof material, cinder-block, various types of siding, metals, glass, plasterboards, dry wall materials, insulation materials, heating systems, window frames, floor materials, types of storage are a few of the things a home builder needs to know about if a home builder is to get the most for the housing dollar.

To get the most with the greatest satisfaction calls for understanding between the home builder and the dealer of building materials. I would like to ask the members of this group - can we bring about better understanding between the home builder and the dealer of building material and contractor? To understand fully one must know building materials.

A FOURTH PROBLEM: Hidden values. Ninety-eight per cent of the rural homes in North Carolina have electricity but how about adequate wiring? Do home builders have a diagram of their home wiring with size wire, circuits, etc.? Do they know how much electricity is required to operate their appliances and new ones? Are they as concerned as to whether they have enough current as they are over the "color" of the new appliance?

Other hidden values are insulation, condensation, plumbing, heat and air-conditioning.

In summary, home builders can cut down on the cost of building -

First: Know building materials

Second: Plan carefully

Third: Buy wisely

Fourth: Put into practice do-it-yourself projects such as:
plumbing, painting, laying floor covering, finishing
floors, cabinet work, etc.

In order to solve this problem the educational agencies in Rockingham County have conducted housing schools in cooperation with commercial agencies.

HOME FURNISHINGS:

What about furnishings for the home? It is as important as the house. Yes, the furnishings play an important role in making a house into a home.

Just as there are many new materials in the building trade, there are many new fiber fabrics and materials being used in home furnishings. As a result consumer information is greatly needed by homemakers if they get their money's worth and satisfaction.

The homemaker also needs to have a knowledge of furniture construction and to know color and how to use it in an effective and inexpensive way.

To stretch the home furnishings dollar families are faced with such problems as:

1. Developing long-time home furnishings plans
2. Obtaining and using consumer information in selecting, buying, and using furnishings, equipment and furniture
3. Construction of curtains, draperies, slip covers, etc.
4. Renovation of furniture
5. Increasing income in order to be able to provide more livable homes.

WHAT IS EXTENSION DOING?

SURVEY - In some communities and counties home demonstration women have conducted surveys in order to have better understanding of existing situations. Not only should people know what the situation is in housing and home furnishings, but who are the contractors, architects, or "Who's Who" in the building and furnishings trades.

TRAINING LEADERS - A housing and home furnishings leader should realize that giving a monthly demonstration is only a small amount of the service she can render to her club, community, county. She should be a demonstration for her area and a contact person.

HOME VISITS - At this time when personalized assistance is so important many leaders, agents, and specialists are spending time making them.

WORKSHOPS - When these are conducted by specialists in county, it is only the first step in reaching people. Leaders should carry on the project. An example of one of the most far reaching workshops is in Macon County. Following a reupholstery workshop the group purchased equipment, secured a room in a public building, and set up good working conditions. There has been a continual flow of people making use of this work center.

Housing workshops have been set up for a group of people interested in the same area. For example, in Nash County the home economics agents worked with families interested in kitchen improvement. A workshop was set up for this group. The morning was devoted to principles of kitchen planning and the afternoon to the individual problems of each family.

RESULT DEMONSTRATIONS - In many counties in North Carolina the people are aware of the program in Housing - Result Demonstrations. These demonstrations are conducted in cooperation with the family, county, and state workers. These houses are planned, built and exhibited. In counties where the program has been conducted there are many requests for other such demonstrations, while in others there has been no interest in this project.

It is not unusual to have hundreds of people travel many miles to attend the open house. This program is far reaching.

INCREASED INCOME - Monetary value should be placed on many home-making projects. As a result of many projects home demonstration women have been able to increase income. Projects from which women have increased income are upholstery, construction of slip covers, curtains and draperies, dried flowers.

SPECIAL INTEREST MEETINGS - Many people who work and cannot attend the regular monthly home demonstration meetings attend special interest meetings, thus extending Extension.

TOURS AND EXHIBITS - Tours through demonstration homes are providing an excellent method of teaching. This method of reaching people is being used in many other phases of housing and furnishings.

Tours through furniture stores, building supply houses, fabric shops, etc. have proven most satisfactory.

WHAT CAN YOU DO TO IMPROVE THE PROGRAM IN HOUSING AND
HOUSE FURNISHINGS IN YOUR COUNTY?