

Necessary Foods for Emergency Feeding

By JAMES M. HUNDLEY, M.D.

The joint policy of the Federal Civil Defense Administration (FCDA) and the Department of Agriculture (USDA) provides that foods for emergency feeding shall be made available from existing commercial stocks and through normal distribution channels. To accomplish this, the food industry and food transportation facilities would be organized nationally and locally to deliver needed foods to emergency areas. The FCDA-USDA plan for emergency feeding poses problems which are primarily administrative. It does not present any immediate problems from the standpoint of nutrition or food technology.

This emergency feeding plan does not preclude the FCDA-recommended practice that all families with infants under 1 year, and families in critical target areas especially, should maintain in their homes—at all times—a rotating 1-week supply of canned evaporated or similar acceptable milk product, necessary cereals, and other special foods for infants. It does not preclude the desirable, and normal, practice in most families of maintaining a rotating pantry supply of food sufficient for 3 or 4 days.

Nor do the joint-planning agencies—FCDA

Dr. Hundley is chief of the Laboratory of Biochemistry and Nutrition of the National Institute of Arthritis and Metabolic Diseases, Public Health Service. He is also consultant on nutrition with the Health and Special Weapons Defense Division of the Federal Civil Defense Administration.

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and USDA—visualize the establishment of any special food stockpiles to be held in readiness for emergency use. Proper organization of food and transportation industries would make stockpiling unnecessary—at least under prevailing conditions. However, it is possible to visualize situations and to anticipate developments which might make it imperative to supplement the existing plan by establishing special stocks of food.

Therefore, it is important to examine and classify the technical information which would govern the establishment and management of food stockpiles, to define areas in which our knowledge is deficient, and to list the foods and food products which are suitable for this purpose. This information should be developed in a form which can be utilized on short notice.

What plans have been considered for providing reserve stocks of food under emergency situations?

Family Food Stocks

In time of emergency, the practice of maintaining a rotating family food shelf should be officially encouraged as much as may be consistent with national food supplies and with due concern for the prevention of hoarding. No technological problems are posed by the family food shelf plan since the foods would be staple products normally procured and used, they would be rotated frequently, and their characteristics are well known to every housewife. Goodhart and Jolliffe (1) have suggested food items which should be included in this family food shelf.

A family food package might be designed as a special packaged ration—or group of pack-

aged foods—for a day's supply sufficient for a family of four. It could be set aside as a permanent reserve and stored in basement and shelter areas. Existing special packaged rations such as those used by the armed forces should be considered.

The desirable characteristics of a family food ration are listed:

1. The food products must be stable for at least 1 year under storage conditions of temperatures fluctuating from 0° to 95° F., and of relative humidity fluctuating from 10 to 90 percent.

2. The foods should be chosen for their general acceptability, for retention of their essential flavor and odor, and for other desirable characteristics under storage conditions.

3. The foods should be well-known types of food which the average housewife can use without detailed instructions.

4. At least a part, and preferably all, of the foods should not require cooking or heating.

5. None of the foods should provoke thirst, and they should require a minimum of water for preparation.

6. The ration should include fruit or vegetable juices to supply fluids when water may not be available.

7. The ration should supply about 2,000 calories per person per day. Detailed consideration of the vitamin, mineral, and protein content is not necessary, but the maximum utilization of natural food products is desirable.

8. All foods should be packaged in dust-proof, closed containers which can be rinsed externally with water, if necessary. Packaging materials should utilize noncritical items to the maximum possible extent.

9. The size, weight, and type of food package should be standardized for easy handling and efficient storage.

10. The foods selected should be items likely to be in good supply, even under conditions of nationally restricted food supplies.

11. The cost should be low.

Warehoused Food Stockpiles

Arrangements could be made for food wholesalers, jobbers, and distributors in suitable locations to increase their normal inventories of

specified food commodities to an extent that would partly or completely meet anticipated needs for emergency use. Since the food commodities specified would be those normally in commercial channels, and since the increased inventories of the wholesalers could rotate at fairly normal rates, problems of storage deterioration are avoided.

Inactive stores of food could be established in selected locations to be held for time of need. Special food stockpiles for civil defense use might contain individual units or family packaged rations in addition to bulk supplies for mass feeding operations.

The 11 recommendations listed for planning a family food ration also apply to inactive warehouse food supplies. However, under the first item mentioned—stability of foods—a storage life of more than one year is recommended. This can be achieved, in part, by more rigid control of storage conditions.

In the stockpiling of food for mass feeding operations, special consideration must be given to food items which require a minimum of preparation and which can be served easily and rapidly on a mass basis. Disorganization and confusion inevitably result in the first hours of an emergency. The simpler the plan for emergency feeding, the more easily it can be organized and put into prompt operation during these critical hours. Normal power and fuel may temporarily be unavailable, and water supplies may be limited.

The establishment of special inactive stockpiles of food offers the greatest challenge to nutritionists and technologists. In many instances, food items which would be desirable for stockpiling are not commercially produced in a form having optimal stability and acceptability characteristics. A more detailed assessment of the technological adequacy of currently available food items for stockpiling is being published (2).

Dehydrated fruits and vegetables, skim or whole dried milk powder, canned evaporated milk, dried eggs, certain types of canned meats, dried soup powder, canned fats, spreads, flour, sugar, cereals, fruit juices, and beverage products are types of food items which currently seem to offer the most promise for stockpiling purposes.

A careful plan would have to be devised for the management of any stockpiles of food to provide for periodic checking and rotating to prevent spoilage and waste. Storage bulk, ease of handling, and protection against rodents and insects should not be overlooked in planning stockpiles for mass feeding.

Special Feeding Problems

Lactating women, in particular, and infants under 1 year have nutritional needs which demand special consideration in the planning of food supplies (see Heseltine, page 872). Individuals with severe burns, fractures, and other major trauma require special nutritional treatment if maximum chances for recovery and speedy convalescence are to be assured (3). Dried eggs, dried whole or skim milk, crude casein, and dehydrated soups offer special promise as products which could be stocked as part of the general ration and which could be made

available in medical facilities to meet the special feeding requirements of the ill and the injured.

Special nutritional supplements—vitamin and mineral enriched food bars, wheat germ, brewer's yeast, tablets and capsules—are not required for civil defense emergency feeding of the homeless. Such products are, however, essential in certain types of major illness or injury. This need can be met by stocking the food supplements as part of medical supplies rather than in general food stocks.

REFERENCES

- (1) Goodhart, R. S., and Jolliffe, N.: Principles of emergency feeding for a large metropolitan area in catastrophe. *Am. J. Pub. Health* **42**: 373 (1952)
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- (3) Butler, Roy D.: Special feeding problems in an emergency. *Pub. Health Rep.* **67**: 867-871 (1952).

New Sewage Projects

More than 2 million people will receive the benefits of new and improved service upon completion of 111 sewage treatment projects authorized during the first quarter of 1952 by municipalities in 33 States, according to figures released in June by the Public Health Service. New plants will be built in 72 instances, at a total cost of \$17 million. The other 39 contracts call for additions, enlargements, or replacement of existing plants, totaling an expenditure of \$10 million.

The Public Health Service cooperates in this work by developing comprehensive plans to abate water pollution and by providing research and technical assistance. The Water Pollution Control Act of 1948 authorized these services as well as financial aid in the form of grants to the States for investigations of water pollution caused by industrial wastes. The projects were developed through the cooperation of State and interstate water pollution control authorities.

Comparison with construction figures for the same months of previous years reveals that the present rate is less than the average for the years 1948-52. It meets only about one-fourth of the estimated needs arising from the growth of cities and industries.