

SCHOOL MEALS PROGRAMME OF BARBADOS
- A CASE STUDY

*AIDS TO PROGRAMMING WFP ASSISTANCE
TO EDUCATION*

* BASIC EDUCATION 7 *
* *****

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The views and opinions expressed in this paper are those of the author
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SCHOOL MEALS PROGRAMME (SMP)

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* Barbados has had some 17 years of experience in running
* a comprehensive school feeding programme, which has proved
* to be very successful. These experiences, which are re-
* counted in this article, will be helpful to national and
* international officials who are called upon to deal with
* school feeding programmes. A particularly interesting
* feature of the Barbados school feeding scheme is the use
* of mobile vans to transport prepared meals from school
* kitchens. The central kitchen scheme is also used with
* success in some urban areas of other countries, for example
* in Swaziland and some parts of India. Other countries
* which face different problems may, when implementing school
* feeding programmes, wish to emphasize more the relationship
* between school feeding on the one hand, and basic education,
* problems of growing food, agriculture, development and
* literacy, on the other. In such countries a school feeding
* programme may also provide new opportunities for community
* organization, and the provision of learning experiences to
* adults.
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EMERGENCE AND DEVELOPMENT

The School Meals Programme in Barbados is administered by the School Meals Department of the Ministry of Education and Culture. It was instituted in March 1963 to implement a Government policy decision to provide cooked lunches for children in all Government Primary Schools. The Scheme was introduced as a pilot project which provided lunches to 1600 students in six primary schools. For this purpose three Kitchen Centres were opened and the operation started with a staff of twenty-six persons.

The initial success of the programme was demonstrated by the popular demand among students for the service, and the Ministry set out in a vigorous way to satisfy that demand through the series of expansions which followed. In 1965, an additional Kitchen Centre was opened and two additional centres were brought into operation in 1969. This increased capacity catered for approximately 13,000 students in 58 schools located throughout the country. In an attempt to advance the goal of universalizing the scheme in primary schools, two Kitchen Centres were expanded to increase the number of beneficiaries to 18,000 in 80 schools. (For data on a number of schools and total enrolments in Government primary and all-age schools, see Annex I).

The ultimate goal was achieved in 1976 when approximately 35,000 students in 117 Primary and All-Age Schools were being supplied daily with school meals from eight Kitchen Centres.

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* This rapid development in the School Meals
* Programme also necessitated fundamental change in the
* administrative structure and supporting services to
* facilitate the efficient functioning of the programme.
* These changes were effected in 1969 by the establish-
* ment of the programme. These changes were effected in
* 1969 by the establishment of a separate School Meals
* Department with a staff of 32 personnel. This Depart-
* ment assumed responsibility for the day-to-day adminis-
* tration of the scheme while overall responsibility was
* retained by the Ministry of Education and Culture.
*

At the present time the complement of staff stands at 735 and comprises:

- (1) 26 administrative staff at the School Meals Department;
- (2) 329 staff at centres for preparation and distribution of meals;
- (3) 362 staff at schools for serving meals;
- (4) 18 watchmen.

Annex II gives a description of the structure of the School Meals Department and shows the organizational chart.

WORLD FOOD PROGRAMME (WFP)

A very important complementary feature of the School Meals Programme has been the invaluable assistance provided by the World Food Programme. In order to cope with the increased coverage of the scheme, the Government sought assistance from the World Food Programme which, in 1966, approved Project WFP/Barbados 284 - "School Lunch Programme". The original duration of this project was for 2½ years at a total cost to WFP of US \$ 386,000. However, due to the successful negotiation of a series of amendments to and extensions of the project, the School Meals Programme has benefited from the continued support from WFP. The current expansion of the WFP-assisted project is scheduled to end in 1981.

The Overall Objectives of the School Meals Programme can be summarized as follows:

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* (i) To improve the standards of nutrition and there-
* by promote regularity of attendance at school.
*
* (ii) To improve standards of nutrition throughout the
* island by an expansion of the scheme to cover
* all public Primary Schools and as a result to
* improve the rate of economic development.
*
* (iii) To provide learning experiences in nutrition edu-
* cation and social behaviour.
*

From the nutritional point of view the principal aims are:

- (i) To provide a meal that is nutritionally adequate, tasty and satisfying.
- (ii) To reinforce inadequate family diets where necessary and so improve the health of the children.
- (iii) To provide one-third or more of the daily total nutritional requirements of the child.
- (iv) To help the child to develop an appreciation for nutritious food.
- (v) To overcome food prejudices by serving a variety of foods.

From the educational point of view the aims are:

- (i) To make the child aware of the essentials of an adequate diet and to thoroughly convince him/her that these foods are necessary to health and growth.
- (ii) To give practical demonstrations in a well-planned, well-cooked and attractively served lunch.
- (iii) To encourage children to discuss in their homes the types of food served in the programme.
- (iv) To assist in providing a model for parents to follow in their preparation of meals for their children.

The social objectives are:

- (i) to provide learning experiences in social behaviour, table manners and table conversation; and
- (ii) to provide opportunities for effective teaching and practice in relation to personal cleanliness as well as sanitation in food handling.

In 1976, the number of beneficiaries including teachers, kitchen and serving staff was approximately 35,000 daily. Of this total teachers comprised 6 per cent, staff 4 per cent and 90 per cent from the student body in the Government Primary and All-Age Schools.



1. Service assisted by Teachers - Note the emphasis on observing correct table manners.



2. Service without the involvement of teachers.



3. Service without the involvement of teachers.
Note: Non-observance of table manners.

NUTRITION OFFICERS AND SCHOOL MEALS OFFICERS

Professional inputs of Nutrition Officers and School Meals Officers are achieved through the following functions:

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* 1. Planning and evaluation of menus. *
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* 2. Cost, quantity and quality control of foods. *
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* 3. Advice on the nutritional value of food, *
* especially milk and vegetables. *
*
* 4. Undertaking dietary surveys. *
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Menus are planned at the central level by the School Meals Department on the advice of the Nutrition Officer of the Ministry of Education and Culture. They are drawn up on a four-week cycle and each of the eight kitchen centres is given a copy with instructions regarding recipes and on general preparation methods including hygiene precautions.

The Menus are planned to provide variety throughout the week and each meal provides for at least one source of animal protein, carbohydrates and fats. Some flexibility is given to each centre in following the instructions depending on the supply of local commodities.

Inspection of food and the efficient utilization of commodities are encouraged by the School Meals Officers who are also responsible for the schools served by the centres under their control.

## PROTOTYPE SPACE FOR A CENTRAL KITCHEN

In the planning of a School Meals Central Kitchen two very important considerations have guided the Ministry: the conservation of "time" and the use of "labour saving" devices to enhance the efficiency of operations.

In the design specifications approximately two square feet floor area is allocated for every meal produced (e.g. 6000 square feet for the production of 3000 Meals). Further details on this aspect are given in Annex III.



2. *Boonies Assisted by Prefects*



3. *Service without the involvement of teachers.*

*Notes: Non-observance of table manners.*

## LOGISTICS OF DISTRIBUTION

For the purpose of distribution the country is divided into eight zones each of which is sub-divided into routes comprising a number of schools. Each kitchen is allocated a fleet of two to four vans according to the number of meals to be served. Each van is manned by a team consisting of a driver, and two or three general workers who are responsible for the loading and unloading of the lunches. Each van is equipped with suitable modern containers in good hygienic condition.



*6. A Schools Meals Service Van*

## SERVICES AT KITCHEN CENTRES

Most of the kitchen centres are well equipped with modern machinery and have adequate space to carry out normal activities.

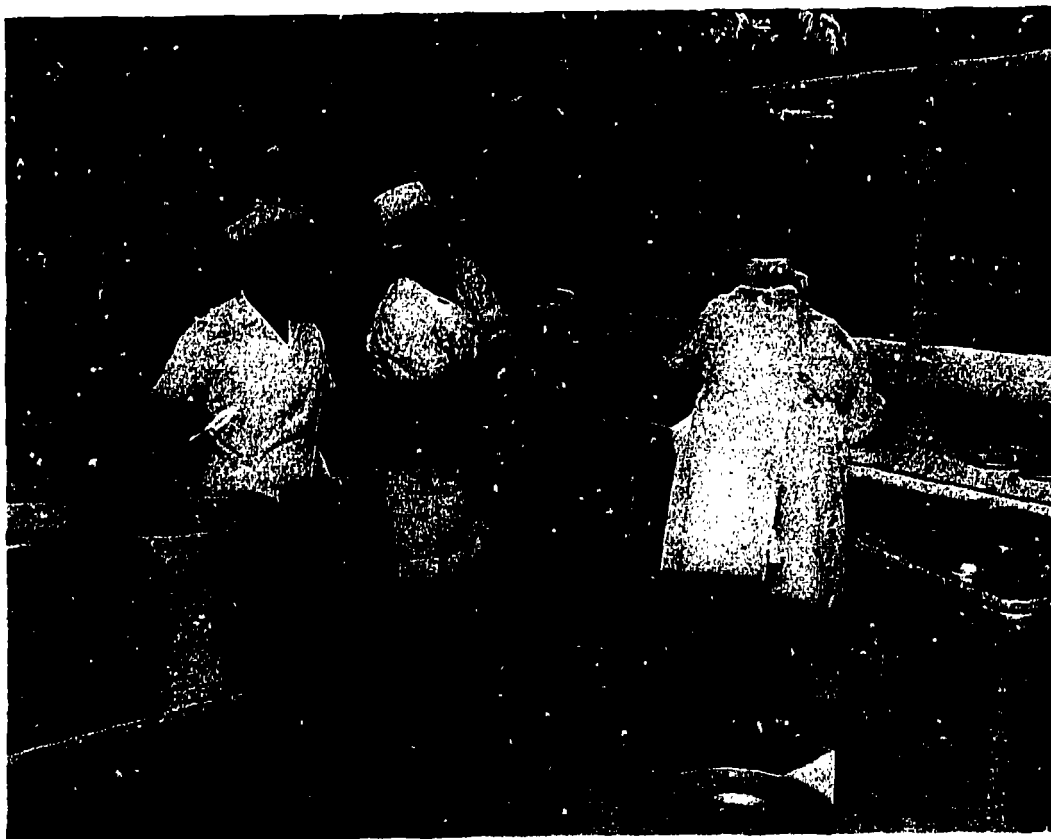
To increase the efficiency of the service forms are supplied to the Schools daily by each kitchen. On these forms are recorded the number of meals to be provided for the following day, and also the number served on the previous day. This data is collated by the Senior Staff in the kitchen and serves as a guide in determining the total number of meals to be prepared for the next day.

After the food has been prepared, it is put into insulated containers and weighed according to the number of meals required for each school. The containers are then checked and loaded on the vans and dispatched by the various routes to reach the schools in time for the twelve o'clock luncheon recess. On arrival at the school, the containers are checked against the "Ordered and Served" forms, which accompany each van.

#### SERVICE AT SCHOOLS

Each school is provided with a staff of servers, approximately one server to every one hundred pupils; and has sufficient equipment (trays, cutlery, glasses and standard measuring spoons and cups) for distribution to pupils on a self-service basis. Children are served meals in trays and generally eat in their classrooms and they dispose of left-overs in garbage tins.

After meals the utensils are washed properly and kept in good hygienic condition in the schools while the containers are taken back to their respective centres where they undergo sterilization and are ready for the next days' use.



## BARBADOS: ENROLMENT IN GOVERNMENT PRIMARY AND ALL-AGE SCHOOLS

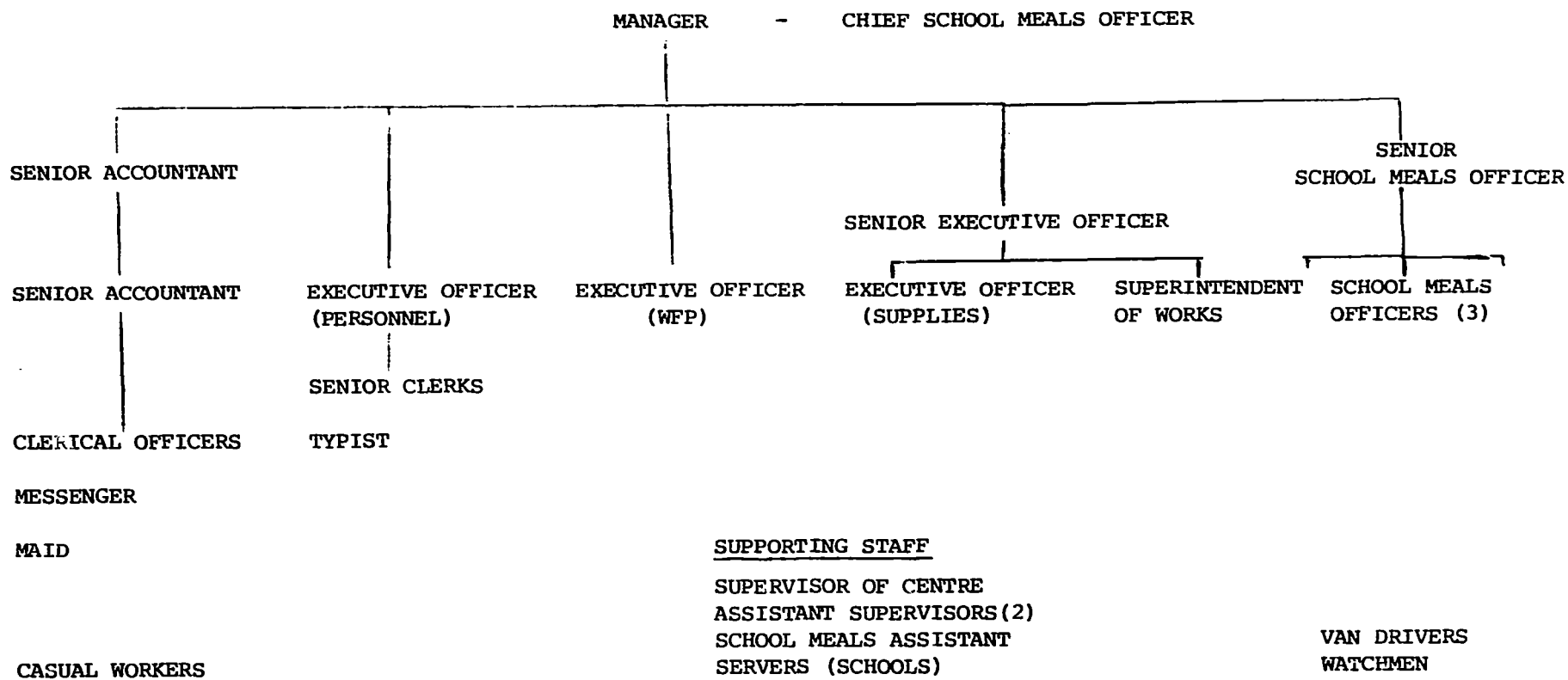
YEAR 1979-80

AS ON 31 OCTOBER 1979

BREAKDOWN BY AGE GROUP AND PARISH

| PARISH SCHOOLS | No. | UNDER<br>5 | INFANTS<br>5-7 | JUNIORS<br>7-11 | SENIORS<br>11 - 14 | TOTAL |
|----------------|-----|------------|----------------|-----------------|--------------------|-------|
| Christ Church  | 14  | 264        | 1136           | 2266            | 813                | 4479  |
| St. Andrew     | 7   | 96         | 376            | 749             | 194                | 1415  |
| St. George     | 9   | 174        | 651            | 1444            | 40                 | 2309  |
| St. James      | 10  | 163        | 511            | 971             | 388                | 2033  |
| St. John       | 6   | 108        | 398            | 780             | 248                | 1534  |
| St. Joseph     | 5   | 76         | 292            | 614             | -                  | 982   |
| St. Lucy       | 6   | 184        | 435            | 786             | 41                 | 1446  |
| St. Michael    | 33  | 1246       | 4003           | 8599            | 437                | 14285 |
| St. Peter      | 8   | 171        | 433            | 781             | 298                | 1683  |
| St. Philip     | 12  | 258        | 768            | 1625            | 145                | 2796  |
| St. Thomas     | 6   | 82         | 437            | 866             | 325                | 1710  |
|                | 116 | 2822       | 9440           | 19481           | 2929               | 34672 |

BARBADOS: ORGANIZATIONAL CHART OF SCHOOL MEALS DEPARTMENT



BARBADOS: STRUCTURE OF SCHOOL MEALS DEPARTMENT  
(1979 - 1980)

One Chief School Meals Officer  
One Senior Accountant  
One Senior School Meals Officer  
One Senior Executive Officer  
Three School Meals Officers  
One Plant and Works Superintendent  
One Executive Officer (WFP)  
One Executive Officer (Personnel)  
One Executive Officer (Supplies)  
One Assistant Account  
Three Senior Clerks  
Six Clerical Officers  
Two Stenographers  
One Messenger  
Two General Workers  
One Cleaner  
SUPPORTING STAFF  
8 Supervisors  
16 Assistant Supervisors  
223 School Meals Assistants  
20 Drivers  
62 General Workers  
362 Servers  
18 Watchmen.

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PLANNING A SCHOOL MEALS CENTRE

The floor area should be based on the number of meals produced daily, and is thought to be adequate at approximately two square feet of floor area for every meal produced (e.g. 3,000 meals daily - 6,000 sq. ft.).

The building should be so designed as to afford maximum daylight and adequate ventilation and should be rat and fly-proof. The floor should be of an impervious material in order to prevent saturation. A non-skid quarry tile laid in a good cement mix is recommended.

The floor area should be laid out into the following sections:

1. -Cooking and baking section
2. -Dry goods storage
3. -Cold storage
4. -Change-room and lavatory facilities for staff

The main cooking and baking area should further be sub-divided into the following work sections:

1. -Cooking and baking
2. -Meat and fish
3. -Vegetable
4. -Pastry
5. -Washing

The cooking and baking equipment should be centrally located in the area provided within easy access to the preparation sections to facilitate operations. The following equipment should be installed and the quantity and capacity determined by the daily output of meals:

- Boiling pans/Steam Jacketed kettles
- Deep fat fryers/Multi-tilting braising pans (preferably)
- Open burner ranges with oven /Double deck
- Ovens for pastry

Directly over this equipment, two extractor fans (capable of extracting the volume of heat generated by the equipment) with a hood correctly designed for the purpose should be installed.

- Meat and Fish - A large three compartment stainless steel sink with hot and cold running water, an eviscerating table for thawing out the frozen meat or fish, a wooden chopping block, preferably on legs, and at least three tables.
- Vegetable - A large floor model food mixer approximately 80 quart capacity, a vegetable chopper with attachments, a large three-compartment stainless steel sink with hot and cold running water and tables.

- Pastry - A large floor model food mixer, a three - compartment stainless steel sink with hot and cold water, two or three wooden top tables for pastry, and cooling racks for finished cakes.
- Washing-up - A large pot-wash sink with hot and cold running water and draining racks.
- Dry-storage - This area should be partitioned off from the cooking area with a wire partition which is rodent and flyproof; shelves should be constructed and fitted against the walls for the storage of canned food with provision made for barrels or large containers for storing sugar and flour, etc. Cupboards with doors and work tops should be fitted. At least one table for weighing and food distribution is needed, and last but not least a good counter scale.
- Cold-storage - One large walk-in refrigerator and deep freeze must be installed; also required is a platform scale for bulk weighing and wooden pallets for the storing of bags, etc.

CHANGE ROOM AND LAVATORY FACILITIES

Change room and lavatory facilities must be provided for staff with individual lockers for personal belongings. The floor area provided for staff is estimated at approximately two and one half square feet per person and is considered to be quite adequate, with a W.C. for every ten persons and for female staff a sanitary disposal unit is installed while for male staff a urinal: a minimum of two wash-basins must be installed with hot and cold water, and a soap dispenser with a good supply of soap.

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The Government recurrent costs to run the School Meals Programme for the last three years are as follows:

| <u>Financial Year</u> | <u>BDS\$</u> |
|-----------------------|--------------|
| 1977-78               | 6,369,598    |
| 1978-79               | 6,129,340    |
| 1979-80               | 6,987,946    |

Cost of Meal - April 1979 - February 1980

| Term             | Total Cost of Meal<br>excluding WFP Contri-<br>bution | Total Cost of Meal<br>including WFP |
|------------------|-------------------------------------------------------|-------------------------------------|
| April -July 1979 | \$ 1,063,200                                          | \$ 1,164,800                        |
| Sept. -Dec. 1979 | 1,115,000                                             | 1,218,560                           |
| Jan.-Feb. 1980   | 481,700                                               | 501,760                             |
| <b>TOTAL</b>     | <b>2,659,900</b>                                      | <b>2,885,120</b>                    |
| <b>Unit Cost</b> | <b>54 ¢</b>                                           | <b>56 ¢</b>                         |

|                                     |                 |       |
|-------------------------------------|-----------------|-------|
| <u>FOOD COST</u>                    | \$ 2,659,899.40 | 43.9% |
| Cost of Preparation                 |                 |       |
| Cost of distribution                | \$ 2,839,587.00 | 46.9% |
| Cost of services at<br>schools etc. |                 |       |

OTHER COSTS

|                                                                                 |                        |      |
|---------------------------------------------------------------------------------|------------------------|------|
| (1) Administration                                                              | \$ 259,863.00          | 4.3% |
| (2) Transport and gas,<br>repairs to building,<br>repairs to equipment,<br>etc. | 299,647.00             | 4.9% |
| <b>Total</b>                                                                    | <b>\$ 6,058,996.00</b> |      |