



REPORT
ON
CURRENT EVALUATION
OF
THE APPLIED NUTRITION
PROGRAMME
1964-65

PROGRAMME EVALUATION ORGANISATION
PLANNING COMMISSION
GOVERNMENT OF INDIA

MAY 1965

PREFACE

The Applied Nutrition Programme represents a bold attempt at helping people, especially in the vulnerable groups, to improve their level and consciousness of nutrition. Initiated in Orissa in 1959 under the name of Expanded Nutrition Programme, it was later taken up in Andhra Pradesh and Uttar Pradesh. Madras followed in 1962, by which time the programme had assumed its present name. By 1965-66, the programme is expected to be in operation in all the States and Territories of India. The importance of the programme from the point of view of its goals as well as its recent and projected expansion, led the Ministry of Community Development and Cooperation in 1964 to request the Programme Evaluation Organization to undertake a quick evaluation. The International agencies—UNICEF, FAO and WHO—, cooperating in this programme, have also been very keen on its evaluation, especially as India has made pioneering efforts for implementing such a programme. Accordingly, late in 1964, the Programme Evaluation Organization undertook a quick evaluation of the working of this programme in Andhra, Madras, Orissa and U.P.

With the deadline of reporting set for May 1965, no elaborate field survey could be undertaken. What was planned, in consultation with these agencies, was a "current evaluation" with the main focus on the planning, administration and extension aspects of the programme. There was also a general feeling that the operation of the programme has been too short for the effect on dietary habits and preferences to be visible enough for an impact study. The method of observation and discussion has been followed by the officers of this Organization for reporting on the administrative and operational aspects of the programme. Whatever progress data are available have also been analysed. These have been supplemented by some of the findings of surveys initiated earlier by the evaluation agencies of the Governments of Andhra Pradesh, Orissa and U.P.

In presenting the report on this current evaluation, it may be mentioned that it should be taken as the initial report in a series of continuing evaluation studies of this programme. No attempt has been made in this report to indulge in any end-evaluation; for the programme is still in its initial phase

(ii)

in most States. Applied Nutrition is a running programme with long range goals in a new and difficult area of extension, and needs to be watched and studied over a long period. The issues raised and suggestions offered in this report are intended to help in the development of this programme and will, it is hoped, receive due consideration.

The cooperation and assistance received from the State Governments of Andhra Pradesh, Madras, Orissa and Uttar Pradesh and their evaluation agencies in the conduct of this study are thankfully acknowledged.

J. P. BHATTACHARJEE,

NEW DELHI;

May, 1965.

Director,

Programme Evaluation Organization.

TABLE OF CONTENTS

CHAPTER	PAGES
I. INTRODUCTION	1—2
II. THE BACKGROUND AND THE CONCEPT OF THE APPLIED NUTRITION PROGRAMME	3—9
Expanded Nutrition Programme—Objectives of the Applied Nutrition Programme—Transition from E.N.P. to A.N.P.—Emergence of Conflicts—Arrangements for Implementation of the A.N.P.—Finance and Assistance—Issues bearing on the objective of the A.N.P.	
III. PROGRAMME PLANNING AND ADMINISTRATIVE SET-UP	10—18
Selection of block areas—Comments on the selection of blocks—Need for some preliminary surveys—Selection of villages—Administrative set-up for programme operation; and problems of coordination—Role of health services—Adequacy of staff and streamlining of responsibility—Role of Panchayats—Role of Mahila Mandals—Role of Youth Clubs .	
IV. PRODUCTION COMPONENTS OF THE PROGRAMME	19—29
Criteria of Evaluation—Poultry Programme—Production of eggs—Status of Progress Records—Pisciculture—Supply of Fingerlings—Irregular and Indivisible nature of catch—Training of Fishermen—Availability of suitable tanks and their controlling rights—Horticulture—Village Gardens—School Gardens.	
V. SUPPLEMENTARY FEEDING PROGRAMME	30—32
Programme Achievements—Difficulties in the operation of the programme—Accommodation for the Mahila Samiti—Selection of beneficiaries.	
VI. HEALTH AND NUTRITION EDUCATION	33—35
Achievement data—Role of the Publicity Department—Communication Media.	
VII. TRAINING	36—39
Progress—Scope for improvement in Training Programme—Reserve staff for training and duration of training—Non-official trainees and place of training—Assessment of the training programme to be made a regular built-in feature.	
VIII. SUMMARY AND SUGGESTIONS	40—49
APPENDIX TABLES	50—54

CHAPTER I

Introduction

1.1. At the instance of the Ministry of Community Development and Cooperation, the P.E.O. undertook towards the end of 1964, a quick 'current evaluation' of the Applied Nutrition Programme (A.N.P.) as it was being implemented in the States of Andhra, Madras, Orissa and U.P. The objective of this evaluation was not to go deeply into the impact of the A.N.P., partly because the period of operation of the programme was admitted on all hands as too short for the effect on dietary habits, patterns and attitudes, to be visible and partly because a scientific impact study needed bench-mark data which were mostly non-existent and the conduct of detailed surveys would have been time-consuming. The main focus of this quick evaluation has, therefore, been on an examination of the operational aspects of the programme and analysis of the problems faced in the field and on suggesting directions in which the programme implementation could be improved.

1.2. In designing this study, the main objectives of the A.N.P. have been kept in view. In fact, the criteria of evaluation have been derived mainly from these objectives. The aspects of the programme implementation covered in this evaluation are programme planning and the administrative set-up, the production schemes, the supplementary feeding programme, nutrition education and the training of personnel. The progress in each of these aspects has been reviewed; and the performance analysed as objectively as can be attempted in a quick study.

1.3. For observations on the field and collection of data for this study, check points and guide lines were prepared by the P.E.O. and finalised in consultation with the Community Development Ministry and the International Agencies—UNICEF, FAO and WHO. While this instrument was to be used for a quick 'current evaluation' of the programme as requested by the above agency, the intention of the Programme Evaluation Organization (P.E.O.) was also to test it at this time and later finalize it in the light of actual experience, so that it could provide guide lines for a continuous, current evaluation of the A.N.P. by the State Governments through their own evaluation units. It was felt that a pilot programme such as the A.N.P. was in many ways, deserved to be regularly evaluated by the evaluation units of the concerned State Governments and that the P.E.O. could help the State agencies in adopting uniform standards and techniques and could subsequently coordinate and consolidate their evaluation work of this programme.

1.4. The check list and the guide points were used by the Evaluation Officers of the P.E.O. for preparing reports on the A.N.P. in the States selected for evaluation—Andhra, Madras, Orissa and U.P. At the same time, these were sent to the State Evaluation Units for their own quick 'current evaluation' of this programme. However, three of these States—Andhra, Orissa and U.P.—had earlier initiated some evaluation survey and study of the A.N.P. in selected areas. The design and content of these

studies had been finalized much earlier and the field work for two of these almost completed by the time the check list was prepared. They could not, therefore, utilize it for their study.

1.5. The Government of Orissa has in the meantime released the report entitled 'Evaluation of the Expanded Nutrition Programme' prepared by its Evaluation Unit. The Government of Andhra Pradesh has also completed its "Evaluation Report of the E.N.P." The Planning, Research and Action Institute of the U.P. had earlier conducted a base-line survey in the Expanded Nutrition Programme areas. The Institute has now conducted a repeat in the E.N.P. areas and a fresh survey in the A.N.P. areas, the data of which are being processed.

1.6. These State studies have been utilized to the extent their findings are enforced by our own independent evaluation. The present report is, however, based primarily on the observation carried out by the field staff and regional officers of the P.E.O. They had detailed discussions on the programme with the State-level Officers, and with the district, block and village level functionaries associated with the working of the programme. They had also made field visits in a few blocks and villages and held personal interviews with some of the beneficiaries and non-beneficiaries of the programme in those areas. In the Chapters that follow, an attempt has been made to summarise the findings of this quick study.

1.7. From the foregoing account, it will appear that this report is in the nature of a "current evaluation" of the A.N.P., based on observation of the administration and execution of the programme at different levels and supported by the relevant survey data collected and analysed by the evaluation organizations in Orissa, Andhra and U.P. Being a continuing and expanding programme with important long-term objectives, the A.N.P. in India has not yet reached the stage when an end-evaluation of its impact is called for. The aspects of the programme taken up for this study are presented in five separate chapters—on programme planning and administrative set-up, production aspects, supplementary feeding, nutrition education and training. These are preceded by a discussion of the background and the concept of the A.N.P. and followed by a summary of the main findings.

CHAPTER II.

The Background and the Concept of the Applied Nutrition Programme-Expanded Nutrition Programme.

2.1. From its inception (1946), the UNICEF has been sponsoring programmes for the supplementary feeding of vulnerable population groups, mainly children—expectant and nursing mothers. In India, a beginning was made in such supplementary feeding in the year 1949 in Orissa. The beneficial results of milk feeding in Orissa set that State Government thinking on the long-range aspects of a sustained programme to raise nutritional levels and bring about nutrition consciousness among the people. It is with this background that the Expanded Nutrition Programme was first taken up in the State of Orissa in the year 1959. In the meantime, two other United Nations' agencies—the FAO and the WHO—had joined hands with the UNICEF in sponsoring cooperative programmes for improving nutrition. The programme in Orissa was thus started with assistance of the three International Agencies, the UNICEF, the FAO and the WHO.

2.2. The accent in this programme has been on achieving a better and higher level of nutrition for the vulnerable population groups in the rural areas. Three essential elements emphasized in this programme are: (a) production of nutritive foods, (b) their consumption, and (c) nutrition education among the people. Poultry, horticulture and pisciculture are the three production items that have been taken up under the programme. The idea has been to encourage and motivate villagers to produce nutritionally valuable food, especially eggs, fish and vegetables, not only through community participation but also through individual effort. The production programme is expected to encourage the consumption of such foods by the producers themselves as well as other members of the community. A supplementary feeding programme is designed to improve the nutritional level of the vulnerable groups, besides educating and motivating the community for improved nutritional standards. These activities are further supported and strengthened by an extension education programme designed to impart a knowledge of nutrition to the village people.

2.3. The success of this experiment in Orissa evoked the interest of the State Governments of Andhra Pradesh (A.P.), Uttar Pradesh (U.P.) and prompted them to adopt a similar programme of Expanded Nutrition. In 1960, the programme was started in Andhra with a coverage of 200 villages in 20 community development Blocks. In U.P., the programme was launched in early 1962 in 800 villages located in 40 Blocks of the two contiguous districts of Basti and Gorakhpur with a population of about 50 lakhs (5 million).

Objectives of the Applied Nutrition Programme.

2.4. About the same time, the Government of India also formulated a positive approach to the problem of nutrition, and emphasized the importance of nutrition education, supplementary feeding of vulnerable groups, and training of doctors, health personnel, teachers and others in

nutrition, in the report on the Third Five-Year Plan (1961—66). The joint approach to the nutrition problem, on the part of the Government of India, the State Governments and the three international agencies resulted in early 1963 in the formulation of the Applied Nutrition Programme with the following objectives:

- “(a) To develop progressively a coordinated and comprehensive national programme of education and training in Applied Nutrition and related subjects, with the object of establishing an effective field service to improve local diets through the production, preservation and use of protective foods.
- (b) To ensure effective utilisation of these protective foods by pregnant and nursing women, pre-school and school children.
- (c) To provide progressively facilities for the training or orientation of tutorial staff required for the educational institutions and training centres participating in this programme as well as for training of managerial and supervisory personnel to be engaged in the various fields of this programme.
- (d) To upgrade and extend facilities for training in nutrition for selective groups of personnel engaged in the national Community Development Programme.
- (e) To assist in the extension of Applied Nutrition Programme in Community Development Blocks in the vicinity of training institutions for demonstration and training purposes.
- (f) To promote through demonstration and education among village communities sound and hygienic practices for production, preservation and use of protective foods.”

Transition from E.N.P. to A.N.P.

2.5. In the initial years which should strictly be categorized as the phase of the Expanded Nutrition Programme (E.N.P.), the State Governments exercised a lot of discretion and flexibility in deciding on the administrative set-up, the pattern and procedure of spreading the programme, and of actual operation. This phase could thus be viewed as one of pilot project. From this point of view, it was good that there was no attempt to enforce rigid uniformity so that the lines on which the programme should be replicated with advantage on a larger scale, could be decided in the light of the results of actual working of the different patterns. This approach to programming has also afforded an advantage in judging the pros and cons of different patterns from the angle of evaluation.

2.6. The flexibility in the programme formulation and operation which was allowed in the initial years, resulted in important differences in the pattern of selection and coverage of villages by the programme. In some States (as in the A.N.P. of Madras), all the villages in the block area were initially proposed to be covered by the programme, while in others only 10 villages were selected per block. In some (as in the A.N.P. of Madras), the vulnerable group was defined as all the children, expectant and nursing mothers in the selected villages, while in others (as in E.N.P. of Andhra Pradesh), even from among the vulnerable group, beneficiaries were selected for supplementary feeding. Differences were also noticed in the relative

emphasis given to the production as distinct from the education criteria in the operation of the programme. For example, some States emphasized the production aspect and as a result gave over-riding importance to the criteria of economic viability irrespective of whether the programme related to poultry-keeping or horticulture or pisciculture.

Emergence of Conflicts.

2.7. After a few years of working of this phase, a fundamental conflict came to the fore, which was well illustrated by the issue as to whether the primary objective in a programme like school garden was nutrition education of the child or production from the school gardens. A clear formulation of this objective was essential for a decision on the minimum size of the land for the school garden. Another conflict in objectives was visible in the supplementary feeding programme, whether the beneficiaries for supplementary feeding should be picked up and brought together for feeding on family basis or individually. Another point which engaged attention, as the programme developed, related to whether the programme benefits should ultimately reach the weaker sections of the community or should also go to the relatively better-off people. As these conflicts came to the fore in programme operation, an attempt was made to resolve them by making the objectives of the programme broader and more comprehensive. In fact, as time passed, the programme began to be envisaged more and more as a package programme with the ultimate objective of creating nutrition consciousness in the people and raising their level of nutrition through self-help production of nutritive foods at home, supplemented by community effort for the benefit of the poorer sections. In this broader approach, incorporated in the A.N.P., the training of the trainers became more important and the programme area began to be linked with the training institutions which were expected to serve as practical field laboratories both for the trainees and the trainers.

Arrangements for Implementation of the A.N.P.

2.8. Both the E.N.P. and the A.N.P. are examples of cooperative programmes involving international agencies, in this case, the UNICEF, the FAO and the WHO. The programme contents fall within the range of activities mainly of three different Ministries, at the Centre, Community Development and Cooperation, Food and Agriculture, and Health, and of the corresponding departments in the State. A number of Statutory bodies, associate and voluntary organizations are also involved in the implementation of the programme activities. A programme of this nature necessarily requires a high degree of coordinating effort, the need for which was fully appreciated by the Government of India. In February 1963, the Ministry of Community Development and Cooperation was entrusted with the responsibility for coordinating the implementation of this programme at the national level. This Ministry in cooperation with the Ministries of Food and Agriculture and Health, worked out a Master Plan in collaboration with the UNICEF, FAO and WHO.

2.9. Based on this Master Plan, subsidiary plans of operations for the States were subsequently drawn up. These operational plans have specified the contents and activities of the Applied Nutrition Programme at the field level. At the level of the State Government, the programme is coordinated and administered through the Community Development Organization

under the overall supervision of the State Rural Development Commissioner. Both at the Centre and the State levels, the coordinating agency receives technical and other assistance of the other Ministries and Departments in respect of the different components of the programme.

2.10. The role of the international agencies extends from the provision of experts on request from the Government of India, to the grant of stipends, vehicles, equipment and supplies. The UNICEF is responsible for supplying transport, equipment and supplies and providing stipends. The role of the FAO and the WHO has so far been to provide, on request from the Government of India, the services of experts in some of the fields included in the Master Plan of Operations. For the Third Five-Year Plan period, the programme provided for an assistance of 10 million dollars from the UNICEF, of which only 4 million dollars have been utilized till the end of 1963-64.

2.11. Madras State was the first in the country to take up the Applied Nutrition Programme in 7 blocks attached to the rural extension training centres in 1962. Orissa took up the programme in 42 blocks and merged the earlier 32 blocks of the Expanded Nutrition Programme, thus, covering 74 blocks. In U.P., 29 blocks were taken up towards the end of 1962 under the A.N.P. (The U.P. Government had earlier taken up 40 blocks under the Expanded Nutrition Programme.) The Andhra Government, however, did not go in for further expansion and continued with the 20 blocks taken up earlier. The programme is in operation presently in the country in 183 blocks and another 73 are proposed to be taken up in 1965-66. In the Third Plan, therefore, the programme is expected to cover 256 blocks as against to 222 originally targeted. It is proposed to take up the programme in another 1000 blocks in the Fourth Plan (1966-67 to 1970-71). A table showing distribution of A.N.P. blocks by States is given below.

TABLE 1/2
Blocks covered by the A.N.P. by States

State	No. of blocks taken up	No. of blocks proposed to be taken up in 1965-66
1	2	3
1. Andhra Pradesh	20	20
2. Assam	..	3
3. Bihar	..	8
4. Gujarat	..	7
5. Jammu & Kashmir	..	3
6. Kerala	5	..
7. Madhya Pradesh	9	..
8. Madras	7	2
9. Maharashtra	..	12

1	2	3
10. Mysore	6	..
11. Orissa	74	..
12. Punjab	20	..
13. Rajasthan . . . . .	..	12
14. Uttar Pradesh	29*	..
15. West Bengal	10	..
16. Himachal Pradesh	3	..
17. Delhi . . . . .	..	2
18. Tripura . . . . .	..	2
19. Goa . . . . .	..	2
	183	73

Finance and Assistance.

2.12. No special Central assistance was provided for the A.N.P. during the Third Plan as it had come in the middle of the Plan and had not been included in the Plan schemes. However, such items as could be adjusted against the relevant Plan schemes attracted Central assistance to that extent. Stipends for trainees and equipments including vehicles, are being made available by the UNICEF. A detailed statement of equipments supplied by the UNICEF to the four States covered by this evaluation is given in the Appendix. (Table A) The Ministry of Community Development and Cooperation is envisaging Central assistance in the Fourth Plan in respect of those components of the programme which do not form part of the normal Plan schemes†.

2.13. Besides making available equipments and financial assistance for stipends, the UNICEF has also agreed to make available additional funds to the extent of Rs. 20 lakhs for giving aid to the Yuvak and Mahila Mandals with a view to provide incentives for good work already done and to provide facilities for developing economic activities of vegetable cultivation, poultry, fisheries, etc. in the A.N.P. areas. This assistance would cover approximately 980 Yuvak Mandals and 2220 Mahila Mandals on the basis of 4-5 Yuvak Mandals and 10 Mahila Mandals respectively per block in the 222 A.N.P. blocks originally expected to be taken up by the end of Third Plan period in different States. The number of Yuvak and Mahila Mandals to

*Exclusive of the 40 Expanded Nutrition blocks.

†More specifically, the items which the Ministry proposes to assist in the Fourth Plan are : cost of digging wells in school gardens; cost of maintenance of irrigation facilities in the school gardens for the first year; assistance for setting up of poultry units in selected schools in the programme blocks; assistance to selected number of youth and women clubs in each of the programme blocks for undertaking economic activities; assistance to Mahila Samitis for acquiring certain equipments for cooking of meals etc. and for production of literature.

receive the UNICEF assistance for the four States in 1964-65 is given below:

State	No. of Youth and Women Clubs to be given UNICEF assistance during 1964-65. $\frac{1}{2}$		
	Blocks	Youth Clubs	Women Clubs
1. Andhra	10	50	100
2. Madras	4	20	40
3. Orissa	30	120	300
4. U.P.	15	70	150

The amount of assistance for each Mahila Mandal and Yuvak Mandal would be of the order of Rs. 700/- and Rs. 500/- respectively. The break-up of the amount is given in the Appendix (Table B).

Issues bearing on the objective of the A.N.P.

2.14. The foregoing review of the background and development of the A.N.P. serves to underline not only the multi-facet nature of the programme but also its joint and cooperative character with implications for coordinated operation and execution. The complexity of this programme as well as its concentration on an aspect of human attitudes and behaviour not easily amenable to change have tended to add to the difficulties in its implementation. It is not unnatural, therefore, that some conflicts and problems arose in the course of implementation of the programme as has been pointed out earlier. Though attempts were made to tackle these as and when they arose, no satisfactory resolution appears to have yet been achieved. Some of these issues are raised here in the hope that they will receive adequate consideration in the near future.

2.15. Reference has already been made to some of the conflicts that came up among the objectives of the programme. The most fundamental conflict appears to relate to the strategy to be adopted for achieving the ultimate objective. Is A.N.P. basically a welfare programme designed to help the poorer and vulnerable sections of the population achieve a higher level of nutrition? If the welfare objective is secondary in importance and of a temporary nature, is the primary objective one of extension and education with a view to raising the nutritional status of all members of the rural community? Should the supplementary feeding and the production schemes be conceived essentially as demonstrations to help the extension process? Should the production programmes also be integrated with the other development schemes under the national plan in the respective spheres and worked out on the basis of their economic viability and future growth? These are questions which come up in most of the discussions on the objective and content of the A.N.P., and the answers, in many cases, are not the same. In fact, it has been noticed that the three International agencies do not often speak in the same vein on these issues. Since these agencies are often looked upon for technical and other advice, any apparent difference in their approach to, or interpretation of the programme is likely to create uncertainty, if not confusion, among those engaged in the implementation of the programme either in the Government of India or in those of the States. It would help the growth of the programme considerably

if the three International agencies could iron out whatever differences they may have in their approach to, or emphasis on different objectives of this programme.

2.16. There seems to be a case for some fresh thinking on the scope of the programme insofar as its coverage of different sections of the community is concerned. The extent to which the better-off sections of the village community are to be drawn within the fold of the programme either in respect of the production activities or of nutrition education does not appear to have been very clearly laid down. Sociologists would, undoubtedly, feel that the acceptance of a nutritional approach to diet with corresponding implications for changes in food habits and preferences would be helped if prestige groups and the leading members of such groups as well as of the community are encouraged or induced to adopt them in the initial phase. This, however, means re-directing a good part of the operational and other efforts of the programme to such groups who would invariably be among the economically better-off sections of the village community. What is needed is the formulation of a strategy for reaching these groups without running into conflict with the welfare objectives of the programme.

2.17. The coordination of the programme in the Third Plan has run into some special difficulties, three of which are relevant in the context of this Chapter. In the first place, the A.N.P. was formulated after the Third Plan was finalized. Attempts had therefore, to be made half-way through the plan to integrate it with activities under the other plan programmes. In the Fourth Plan, however, this problem would not arise if the A.N.P. is included among the plan programmes. This would help the State Governments in making needed arrangements for its effective implementation even from now. Secondly, the expansion of the programme has also, in some cases, been held up because of the delay in the receipt of vehicles, equipment and supplies. This may be a transitional problem; and it is hoped the time lag would be cut down considerably before the Fourth Plan is reached. Thirdly, the grants and assistance made available or channelled through the blocks have not been put together in the form of a pooled provision in the budgets of the blocks. It would probably help the programme if assistance to be channelled through the blocks is provided for in their budget according to a schematic pattern as has been done for the Community Development programme.

CHAPTER III

Programme Planning and Administrative Set-up

3.1. As has been explained in Chapter II, the planning process and the system of programming in the initial years had a lot of flexibility. The State Governments had more scope for initiative and adjustment in the light of local conditions. This has been reflected in different approaches to programme planning and even to some aspects of administration. The patterns and procedures followed for the selection of block areas and villages, and the involvement and role of different agencies and organisations have not been the same or even similar in the different States.

Selection of block areas.

3.2. In Orissa, the selection of blocks was guided by factors like availability of funds in the block budget, local enthusiasm and good communication facilities. Blocks which had at least two more years to run in Stage I were preferred. Local enthusiasm was judged by the smooth functioning of the Youth Club and Mahila Samitis and by public participation in, and contribution to the development programmes. Good communication facilities were expected to ensure not only better supervision and follow-up action but also to help in achieving better demonstration effect. Blocks around training institutions were preferred. Sometimes, however, competing claims of different Panchayati Raj bodies and local representatives etc. for inclusion of their areas under the programme, had to be reckoned with. In Andhra, the blocks selected for operation of the programme were picked out on the basis of relative performance in developmental activities and the existence of a Primary Health Centre. While, in Andhra no weightage was given to the existence of training centres in the blocks and in Orissa some consideration was given to this factor, in the States of Madras and U.P., block areas were selected only where extension training centres were located. The main idea behind this move was to enable the training centres to have the project areas as practical field laboratories. This was expected on the one hand, to improve the training imparted by these training centres, and on the other, to strengthen the implementation of the programme as the personnel to be trained were within a short distance and their performance after training could be watched and followed up. In Madras, the programme was launched in 1962 in seven blocks attached to the seven Rural Extension Training Centres (R.E.T.C.) and these centres have been a great help in the dissemination of nutrition education. Existence of Home Science Wings in 3 of the 7 A.N.P. blocks has also contributed to a better working of the programme. In U.P., 29 blocks attached to the Training Centres were selected.

3.3. In the selection of blocks, an attempt has also been made to disperse them over districts as much as possible. In Andhra, one block has been selected from each of the districts taken up in the course of the three year period, 1960-61 to 1962-63. In the other States also, only in a few cases, two blocks have been taken up in the same district. The

29 blocks of U.P. come from 23 districts; and the 7 blocks of Madras from 6. In Orissa, however, the number of districts being only 13, the 74 blocks were distributed in all the districts.

Comments on the selection of blocks.

3.4. The methods followed for the selection of blocks by these State Governments have been described above. Certain lessons can be drawn from the experience of these States. One of these is that the procedure followed in the later years of the programme especially in Madras and U.P., of selecting blocks adjacent to the training centres has much to commend itself. A specific institutional support is provided to the programme by the training centres which also provide technical guidance and supervision, besides receiving the feed-back from the field. It is true that this approach is particularly feasible in the initial phase when the number of blocks to be selected is not likely to be large. But even when the programme reaches the phase of expansion in coverage, it will be desirable to work out a system for maintaining contacts and links between the blocks and the training institutions.

3.5. Both in the matter of selection of block areas and of finalizing the content of the programme, the Panchayati Raj bodies—the Zilla Parishad at the district level and the Panchayat Samiti at the block level—could be involved more fully than has been done in some of the States. This view has also been expressed in the Andhra Government's evaluation report. Their participation in the preparatory stage would infuse in these people's organizations, a sense of responsibility and acceptance of the programme that would contribute to an improvement in its implementation. To encourage and promote the interest of these bodies, it would be useful at the stage of expansion of the programme (when 1000 blocks are to be covered) to emphasize, as the Andhra Government did originally, that blocks showing a good performance in respect of agricultural and public health extension would be given preference in selection for this programme.

Need for some preliminary surveys.

3.6. *Assessment of local resources.*—There does not appear to have been any systematic assessment of the availability of local resources, both physical and human, carried out prior to the selection of blocks. Availability of physical resources like land and irrigation for the horticulture, tanks for pisciculture, etc. acts as a limiting factor in the implementation of the production schemes. Human resources like leadership in the panchayat, Mahila Mandals, Youth Clubs and school teachers, can functionally contribute a lot to the success of the programme. The programme has reportedly suffered wherever areas were selected without fully taking into account the availability of local resources.

3.7. *Assessment of nutritional deficiencies, etc.*—The formulation and concretization of the programme were expected to be done on the basis of certain background data and materials. For example, it was hypothesized that the need of the programme would be felt more acutely in those areas where there were greater manifestations of mal-nutrition and under-nutrition. Accordingly, for concretizing the content of the programme as well as for crystalizing the dietary pattern and cropping pattern to be propagated in the programme area, it was considered more logical to have

a diagnosis of the nutritional deficiencies and to record the local nutritional problems in the area. On that basis, those pockets were to be picked out for programme operation where nutritional deficiencies were of larger dimension. For such areas, the prevailing dietary pattern and preferences of the people should have been ascertained and a balanced dietary pattern, desirable to be achieved, worked out in its light before propagation and extension. In the actual formulation and execution of the programme these steps have not been generally taken, partly because of the complexity of the job and partly because of the administrative approach to the problem. Attempts could, however, be made to get at least a notional idea of the nutritional deficiencies and problems. A baseline survey from this angle, would be desirable, not only to obtain the total picture for the population but also the picture for different socio-economic groups. The programme to be advocated in the area should be formulated on the basis of these surveys, as far as possible.

Selection of villages.

3.8. In the choice of villages to be covered under the programme also, different approaches were adopted in these States. In Orissa, 10 villages were selected per block. While selecting villages, local enthusiasm, leadership, existence of Mahila Samitis and their sound functioning were taken as some of the important considerations. The views of the Panchayat Samiti regarding the feasibility of the programme in particular villages were also given due weight. In Andhra Pradesh, 10 villages per block were selected on the basis of availability of resources like land for school gardens, tanks for pisciculture. To what extent public participation would be forthcoming, was also taken into account. It was taken for granted that if the above conditions were fulfilled, it would be possible to find suitable persons for poultry keeping. In actual practice, the field reports show that these criteria were not always adhered to in village selection and in some instances, the assumption about poultry keepers was not found valid. In Madras on the other hand, a selective approach was not adopted and all the villages were considered suitable for the operation of this programme. There was initial haste and anxiety to spread the benefits as widely as possible. This meant inadequate return to some of the inputs and investments. The results would have been more fruitful if villages had been selected more carefully, based on existence of sound village leadership and physical resources. In U.P., no specific criteria were laid down for the selection of villages. But, it is reported that in the first phase, generally those villages which had better communication facilities were selected in consultation with Kshetra Samitis. In the second phase, villages contiguous to the first phase villages were taken up and the remaining were expected to be covered in the third phase.

3.9. This brief review of the method of selection of villages does not indicate that any definite strategy has yet been worked out for spreading the programme in the selected blocks. The attempt made in Madras to take up the programme in all the villages at the outset runs counter to any systematic approach based on strategic phasing so necessary for implementing a difficult programme with inadequate resources. In U.P., a scheme of phasing eventually emerged, though it did not exist initially. It would help the programme, if initially it is taken up in villages where the physical, human and institutional resources are available and favourable. In this

assessment, the views of the local bodies, Panchayats and Panchayat Samitis should be ascertained. The State Evaluation Committee of Andhra has also suggested that the Panchayat Samiti should make the final selection of villages on the basis of the technical advice tendered to them. This will infuse the Panchayat Presidents with greater sense of responsibility and interest and also create better response from the people.

Administrative set-up for programme operation; and problems of coordination.

3.10. Working of the Applied Nutrition Programme as envisaged, assumes coordination among the international, national, State and local agencies in order to achieve substantial results. At the Central level, the chief responsibility of coordination has fallen on the Ministry of Community Development and Cooperation. In order to ensure coordination at the different levels—nationals, State, district and block—the vehicle employed is of coordination committees. The administrative set-up for implementing the A.N.P. is more or less uniform among the States. The ultimate responsibility for the administration and coordination of this programme rests on either the Development Commissioner (as in Andhra), Agricultural Commissioner (U.P.) or the Additional Development Commissioner (Madras). In U.P., the Deputy Development Commissioner (Training) acts as a Liaison Officer and is actually the Officer-in-Charge of the programme. In each State, a Coordination Committee has been set up, with heads of concerned departments like Agriculture, Animal Husbandry, Fisheries, Education, Health, Social Welfare, etc. Field reports suggest that at the State level, coordination is more or less well-achieved through this coordination committee. It meets frequently, reviews the progress of the programme and discusses problems which stand in the way of speedy implementation, problems such as time-lag in release of funds, sanction of additional staff and supply of adequate facilities from relevant departments and agencies. Again, the importance of the coordinated working of the programme and functional responsibility of the different agencies are well-understood at the block level. In Andhra and Orissa, the coordination is achieved through the Panchayat Samiti, and in U.P. and Madras through the block coordination committee.

3.11. But, the situation is not very encouraging *at the district level*. In the States of Andhra and U.P., district-level committees have been constituted; in Andhra, the District Collector is the Chairman and in U.P. the District Planning Officer. The coordination meetings at the district level, however, are not regular, nor very effective. In Madras, no coordination committee has been set up at the district level. It should, however, be noted that the mere constitution of coordination committees does not automatically and by itself result in the solution of all problems. The committees will have to function regularly and with authority. Otherwise, actions do not follow. Instances have been reported from the field, which suggest the need for better-integration and coordination of the working of the different agencies involved in the programme. For example, in one of the blocks in Andhra, block authorities took pains to provide suitable irrigation facilities through pumpsets to all school gardens. But their efforts could not fructify because of inordinate delay in energising them. Similarly, transport bottleneck hampered adequate supervision from women welfare officers. Further, the technical staff have not been able to exercise adequate

supervision and give sufficient guidance in the matter of maintenance of village poultry units.

Role of health services.

3.12. *Nutrition Divisions and State Nutrition Officers.*—Linked with the question of administrative set up and problems of coordination is the issue of what role the health services are playing in the A.N.P. at the moment, the part they are expected to play and the extent they have been equipped for the task. To have an effective implementation of the nutrition and health aspects of the A.N.P., each State Government was required to set up a Nutrition Division under the Department of Health and equip it with qualified staff. The Ministry of Health at the Centre had suggested a minimum staffing pattern for such a Division. In the four States under study, the Nutrition Divisions have actually been set up. Their staffing pattern and the envisaged functions are indicated in the Appendix (Table C). The State Nutrition Officers, in charge of the Nutrition Divisions have been appointed. They are generally responsible for taking action through all the medical and health institutions in the area, for a proper diagnosis of the nutritional deficiencies, recording of local nutritional problems and suggesting proper health and dietetic precautions and measures. In addition, they are entrusted with the responsibility of organizing nutrition training courses and supervision of the Applied Nutrition Programme. In Andhra, it is reported that initially a qualified person was appointed as State Nutrition Officer; but, after her resignation, the Deputy Secretary of the Panchayati Raj Department was placed in charge of the Nutrition Division. This was contrary to the qualifications prescribed by the Health Ministry. There seems every justification for insisting that the Officer in charge of Nutrition Division should have adequate competence for and experience in nutrition work. The Nutrition Officer of Madras is no doubt a qualified Doctor but apparently needs further training in nutrition. In U.P., the State Nutrition Officer seems to be fully qualified. Even this cursory review suggests the desirability of giving more attention to the selection of proper persons for holding charge of the Nutrition Division.

3.13. *Role of the Primary Health Centre.*—According to the concept and operational plan of the A.N.P., the Primary Health Centres have a very important role to play in the programme. They are required to help in identifying the most important nutritional deficiencies in the area, advise on the dietary pattern to be advocated in the programme block and train the programme personnel on the health aspects. They are to conduct base-line dietary and consumption surveys, make clinical and other measurements for health surveys. In other words, their role is crucial both for formulating and concretizing the technical 'content' of the programme at the local level as well as for propagating it. The information presently available, however, shows that the Primary Health Centres have not yet been involved in the programme to any significant extent. They should be made to identify the nutritional deficiencies and to work out a balanced dietary pattern for propagation. They should also play a substantial part in nutrition education and follow up of the beneficiaries under the programme. At present, they are involved only in the selection of beneficiaries for the supplementary feeding programme. Even there, the part played by them is not adequate. The State Evaluation Report of the Andhra Government has made two major criticisms. Firstly, the list of

Beneficiaries prepared by the health authorities at the commencement of the programme was not subsequently revised, but was continued for the entire period. Secondly, there is no justification for officers of a level higher than that of the Medical Officer, Primary Health Centre, to be entrusted with the finalization of the beneficiaries' list. In their view, the medical officer of the health centre should be made responsible for the preparation of the final list. This will infuse a greater sense of responsibility at this level and elicit from the Medical Officer better attention. They have also suggested that the maternity assistant should be asked to supervise the distribution of eggs and fish to the beneficiaries wherever possible. These findings of the Andhra Evaluation Report are more or less representative of the field situation in other areas as well, as far as the role played by the health services is concerned.

Adequacy of staff and streamlining of responsibility.

3.14. The above review of the administrative set-up brings out clearly that in all cases, it is not only a question of coordinated working of the agencies of different departments. There is also the general complaint from both the block authority and the staff of the Primary Health Centres that they are so busy with their normal developmental work that it is not possible for them to find adequate time to do justice to the specific aspects of this programme. It appears from the field reports that Nutrition Officers have not been able to make field visits frequently because of shortage of time with the result that guidance and supervision from the State level has not been adequate. There is need for a proper assessment of the work load of the staff. And, where such a study justifies additional staff should be sanctioned so that the agriculture, animal husbandry and health aspects of the programme are properly looked after and attended to. Further, in order to get maximum from the staff working on this programme where functionaries of the different departments are involved, it is imperative to adequately define and streamline the responsibilities of the different functionaries. This is particularly important for the success of a programme for which specific staff commitment and sanction are not there.

Role of Panchayats.

3.15. People's institutions, particularly panchayats, are expected to be fully involved in the operation of the A.N.P. They are considered to be the most effective agency for achieving the desired response from the people. Experience in Madras justifies this hypothesis. In this State, they have played a very useful role in carrying out the A.N.P. They were required to provide financial assistance to the poultry keepers from their funds, effect collection of eggs, supply land for school and village gardens and do fish rearing in the available ponds. In fact, they are required, according to the plan of operations, to help in the implementation of all the A.N.P. programmes at the village level; and more or less in all these operations they have actually given a very good account of themselves in Madras. Only their performance in the supply of land for school gardens and in the supplementary feeding programme was not as satisfactory. On the other hand, panchayats in Andhra Pradesh have not had much to do with the programme except for pisciculture. They had almost no role to play as far as poultry and gardening was concerned. Even in the realm of pisciculture, they did not evince sufficient interest in

the protection and maintenance of the tanks, though they were given incentive by way of a share in the catch.

3.16. In Orissa, all the revenue tanks have been transferred to the gram panchayats; and the gram panchayats are expected to renovate them after obtaining loan from the Government, stock the tanks with fingerlings and ultimately after one year, give at least 6 Kg. of fish per week per tank to each Mahila Samiti for six months in a year. But, their performance has not been very satisfactory. While the State Evaluation Report of Orissa does not comment specifically on this point, the information given in the village notes presents a rather unhappy picture. Out of 27 villages where panchayat tanks are available for making contribution, actual contribution has been made by only 10; and though another 9 made a profit out of pisciculture, they did not contribute to the mid-day meal programme. The plan of operations provides for the procurement of the items of balanced diet in the supplementary feeding programme, by the panchayat samiti through gram panchayats and village community. But, this was not done uniformly by all the panchayats. It would be useful to attempt a diagnosis of the differential behaviour of the two groups of the panchayats—one contributing to the mid-day meal programme and the other not contributing—so as to bring out the factors which encourage them to contribute from pisciculture to the mid-day meal programme and the factors which discourage them. Some of the reasons given for the gram panchayats not contributing to the mid-day meal programme in Orissa are :

- (i) As the loan is taken by gram panchayats on interest, the free supply of fish to the Mahila Samitis means a loss to them, which they cannot afford;
- (ii) In the months of July to September, some of the tanks are flooded and, therefore, the catching of fish is difficult; and
- (iii) The rate of 6 Kg. from a tank as envisaged in the programme operations, is perhaps operationally not feasible taking into account the nature of the catch and the size of the tank.

3.17. A few observations in the State Evaluation Report of Orissa suggest that the pisciculture programme would have made better headway if the pisciculture tanks of panchayats had been transferred to the Mahila Samitis. The implication as well as the desirability of this step need to be examined more fully.

Role of Mahila Mandals.

3.18. Supplementary feeding to vulnerable groups like expectant and nursing mothers, pre-school and school children, is an integral part of this programme. On the assumption that women would be most effective in implementing this part of the programme, as well as with a view to augmenting the meagre personnel resources of the block for extension and nutrition education work, Mahila Mandals or Samitis have been drawn into the A.N.P. The Gram Laxmis and members of Mahila Samitis have been trained in the preparation and distribution of food to these vulnerable groups. The performance of the Mahila Samitis has not been uniformly good in all the States. In Orissa and Madras, they have done a good job and given a good account of themselves. But in Andhra and U.P. they

have not been able to discharge their responsibility satisfactorily in the feeding programme. Many of the feeding centres had to be closed down in U.P.; one of the reasons for closure being that proper accounts could not be maintained by the Mahila Samitis. In Andhra, their poor performance has been ascribed to lack of facilities like suitable accommodation, and cooking equipment and inadequate supply of produce.

3.19. An attempt has been made in the Orissa evaluation report to compare the level of consumption in the 'Prize winning Mahila Samiti villages' with that in the 'other villages' with the following findings: "People living in prize-winning Mahila Samiti villages consume more vegetables, fruits, fish and eggs, ghee, etc. than the average person elsewhere. The discussion. clearly brings out the fact that Mahila Samitis had done a good job; and it is worth investing more resources on their organization, maintenance and welfare. . . . We should, therefore, actively work for improvement of women's clubs all over the State if we intend to spread the message of the Expanded Nutrition Programme, fast". To present a balanced picture, it should also be stated that the data presented in this report show, on an average, a lower level of consumption of fish and rice in the prize winning Mahila Samiti villages than in the 'other villages'. While the lower level of intake of rice may be deemed nutritively to be an improvement, the same cannot be said for fish. It is understood that the reason for the lower level of fish consumption was inadequate supply of fish for the feeding programme. In any case, what has been achieved by Mahila Samitis/Mandals on Orissa can be achieved by the same institution in other States provided adequate encouragement and support is given to these organizations.

3.20. While Mahila Samitis have been generally involved in the supplementary feeding programme in all these States, it is only in Orissa that they have also been associated with poultry keeping. There are 10 village units attached to the Mahila Samitis. The strength of each unit is 40 layers and 4 cocks. There is also an attendant to look after the birds in the Mahila Samiti units. The eggs produced in these units are meant for the feeding programme in the Mahila Samitis. It is expected that, on an average 5,000 eggs will be produced at the minimum. The requirement of the Mahila Samitis being 3,500 roughly, the balance of the eggs are to be sold and credited to the funds of the Mahila Samitis. The pisciculture scheme also envisages that tanks with a water spread of 4 acres each should be attached to the Mahila Samiti. However, the fish feeding programme has not been very successful even in the Mahila Samiti villages, as has been pointed out in the last paragraph.

Role of Youth Clubs.

3.21. While panchayats and Mahila Mandals are relatively more involved in the A.N.P., Youth Clubs are yet to be drawn in. There has been a growing awareness of the importance of Youth organizations. In 1964, the Ministry of Community Development has addressed the State Governments on the need for involving these organizations more effectively in the promotion of production programmes in the A.N.P. areas.

Their role has been emphasized, especially in vegetable cultivation, poultry and fisheries programmes, which could be taken up by them both as individual and group projects. Increasing efforts are now being made by the State Governments to associate Youth Organizations in the production activities of the A.N.P. However, the actual situation in the field is that these organisations, wherever set up, are still in their infancy and are likely to take some time before they can actively help in the Applied Nutrition Programme. While the plan operations do make a mention of involving Youth Clubs, the details have not been given. It may be better at this stage to spell out concretely some of the lines on which Youth Clubs can be operationally brought into the production programme. In Madras, though the 'Youth Clubs are still in the formative stage, in a few villages a portion of the panchayat garden land was allotted to them for growing vegetables and fruits of their own choice. Such incentives were expected to help in the growth of desired tendencies and activities among these clubs. But, unfortunately the scheme could not make much headway due to practical difficulties. In U.P., according to the plan operations, members of the Youth Clubs functioning in the villages are to be fully associated in increasing the production of vegetables and fruits. But it was noticed in one of the blocks that there was not much of group activity. Some individual members of Youth Clubs had established their own kitchen gardens and some were given training in gardening. The case is thus strong for spelling out the details of the activities the Youth Clubs are expected to go in for and the way in which they are to be encouraged and helped.

CHAPTER IV

Production Components of the Programme

Criteria of Evaluation.

4.1. The production components of the programme are poultry, pisciculture and horticulture. The production units are expected to be economically viable, contribute to the supplementary feeding programme, and ultimately result in raising the level of nutrition and nutrition consciousness among the people. These are also expected to initiate a change in the production and consumption behaviour of the people, which would sustain itself even after the programme facilities are withdrawn. Keeping in mind the above objectives and orientation of the A.N.P., the criteria for evaluation can be broadly summed up as (1) economic viability of the units; (2) continuity of production by the operators of the units even after the training phase; (3) proper management of the village units; (4) contribution to the feeding programme; and finally (5) their utility in raising the level of nutrition as well as of nutrition consciousness in the people. At this stage of operation of the programme when sufficient time has not elapsed to show perceptible results in respect of nutrition levels and consciousness, the current evaluation, perforce, had to use only the first four criteria. The broad findings are presented in the following paragraphs.

Poultry Programme.

4.2. *'Deep litter' system.*—For the poultry units under the A.N.P. the 'deep litter' type has been preferred to the 'open run', on account of the greater protection the former offers to the birds from the weather and the predators. Since the starting of village units is not so much of a problem, their number should not necessarily be an indicator of the success of the programme. The crucial test is whether they are run on sound lines. Two important factors which contribute to a resistance to the 'deep litter' system are first, higher cost of feed than in the 'open run' type and secondly, a comparatively larger size recommended on the ground of economic viability. Both these factors call for a relatively larger investment from the poultry keepers. The financial and management implications of the system also point in another direction. Perhaps, the deep litter system requires specialization in poultry keeping, the benefits of which can be more readily derived by the relatively better-off sections of the community. There is, therefore, an *a priori* possibility that the weaker section may not be drawn into this programme as much as they should be. It would be useful at this stage to assess through a survey what proportion of the poultry keeping with the deep litter system comes from the weaker sections. One way to reduce to the minimum this disadvantage is to make the size of the poultry unit less rigid. The education aspect may be given the first place and economic viability only the second. In fact, from this angle, the programme should be more flexible, the pattern of assistance should not be conditioned on adoption of

the deep litter system. One of the States U.P. had formerly restricted the subsidy to deep litter units, but later made it available also to units of the open-run type.

4.3. Another bottleneck in the implementation of the poultry and egg production programme through the 'deep litter' system is non-availability of cheap materials for deep litter. In Andhra, paddy husk is used for deep litter; and because there is sufficient availability of this in coastal Andhra, its cost is not high. But, in those areas where paddy husk is relatively costly, it should be replaced by other materials like saw dust, groundnut shell, etc. The difficulties in the management of the deep litter system lie not only in the high cost of feed and deep litter materials but also in the implied obligation of timely feeding to the caged birds; whereas in the free range system, a high cost is involved neither on the feed nor on the deep litter materials; nor is so much of timely attention of the poultry breeders required for feeding the birds.

4.4. *Poultry Custodians.*—The viability and success of the poultry units depend ultimately on the selection of the right persons or agencies to run them and the management efficiency they acquire and display in feeding, disease control etc. Since the key factor is selection of the right persons or agencies, additional time and care devoted to this process will always be worthwhile. These persons should have sufficient interest, time and capability to run the unit on efficient lines. The Evaluation Committee of Andhra has observed that the right type of persons were not selected in that State as "Custodians" to run the poultry units, with the result that many units were closed down even before the completion of one year of operation. To draw right persons into the training programmes, there is provision for payment of stipend to the trainees. Field observation suggests that it may be better if the stipend is given in kind as is being done recently in U.P. Birds valued upto the stipend amount are given to the trainees. This helps the trainees to get started on poultry production immediately after their complete their training.

4.5. *Mortality.*—On the disease control side, the performance has not been upto the mark as there has been high mortality among the improved birds. They are reported at times as too delicate to stand the normal rigours of the climate and the sanitary conditions characteristic of Indian villages. Generally, the entire stock is supplied after the birds have been vaccinated and immunised. In spite of this, however, there has been a high mortality rate. One of the factors affecting mortality is the age of the chicks. In fact, some of the States still prefer one month-old chicks to day-old chicks because of mortality considerations (e.g. West Bengal). In U.P. formerly 5 month-old chicks are distributed to the village poultry units; but now they have accepted the policy of distributing day-old chicks. In the hill areas, one month old chicks are still being distributed. With high mortality, proper arrangement must be made for the replacement of dead birds. The breeders also have not made adequate attempts to replace the lost stock through normal hatching methods. There is relatively more scope for better and fuller utilization of the mammoth incubators supplied by the UNICEF (in Andhra Pradesh and Madras), through provision of required technical know-how (A.P.) and building facilities (Madras). The so called 'small' incubators supplied to the breeders have not turned out to be very economical because they are under-utilized in spite of their small size. Possible solutions to these problems could be firstly to arrange

for more adequate and regular veterinary aid to the poultry units (suggested in Chapter III); secondly, to supply birds from the main centre; thirdly, to encourage a group of village units to have a common hatching programme at a convenient and nearby place.

4.6. Breeding and Hatching Arrangements.—In the way the village poultry units function, there does not seem to be a conscious attempt made to use fertile eggs of exotic birds for hatching purposes, though this step will certainly result in improvement of the quality of the poultry birds in the area. Such eggs fetch a high price—almost double the price of the eggs of local birds—and, therefore, the custodians are keen to sell them. If a system could be worked out by which these fertile “exotic eggs” are exchanged for desi (local) non-fertile eggs (at exchange rates fixed suitably to take account of the price differential), the non-fertile desi eggs could be used for the feeding programme while the fertile exotic eggs could be used to improve the breed of the poultry birds in the area. Field reports suggest that in Andhra, only about 50 to 60 per cent of the fertile eggs from exotic birds have been used for hatching purposes. In Madras, there is a relatively greater consciousness on this point, and exchange system of some sort operates, though the actual extent of such exchange is not known. In one block, only 5 per cent of the fertile exotic eggs were exchanged for non-fertile eggs of desi birds and another 6 per cent were used for hatching. There is a strong case for giving greater attention to this aspect in the implementation of the poultry programme.

4.7. Poultry feed.—Relatively slow progress on the production side has been due to various factors like delay in the construction of poultry houses, as in Madras; supply of fairly old birds, as in both Madras and Andhra; non-replacement of very old birds; poor quality of poultry feed as in U.P. and Madras; etc. To these has been added the very acute problem of getting balanced feed for poultry at reasonable price. This is indeed a serious problem and deserves immediate attention. This problem was not felt by poultry custodians in the initial years when they got free supplies of concentrated mixed feed. In Andhra, the practice is to supply this mixed feed free for two years. But, after the discontinuance of the free supply, the poultry breeders are not able to maintain the quality of feed because of the price factor. The quality obtained from the private agency is not as good either. (This is reported from Madras). As far as local action goes, the problem can be tackled on two fronts—First, in each block an attempt should be made to institute arrangements for preparing standardized concentrated mixed feed and selling it to the poultry breeders at reasonable price. Secondly, the poultry breeders should be trained to prepare their own feed, and later helped to undertake this work through supply to them of only those ingredients that are not available in the village itself. It has also been noted that the price of feed depends on that of coarse maize which has been in short supply for some time. If the supply situation does not improve materially, there is no other alternative but to go for some import under the P.L. 480.

Production of eggs.

4.8. That the management of the units has not come upto a reasonable level of efficiency is indicated by under-production of eggs and under-performance in terms of supply of eggs for the feeding programme. In the appended table (Tables 2, 3 & 4), data are presented on production and

distribution of eggs, culled out from the State Evaluation Report of Andhra and the progress reports of Orissa, U.P. and Madras. The size of units in Andhra is 20 hens and 3 cocks. In Madras, the size is supposed to be 60 hens and 6 cocks. However, a good number of units were really half-sized or even less and as such they were suitably amalgamated and reorganized in the light of the recommendations of the Conference on Applied Nutrition Programme, Krishnagiri, in November, 1964. The number of reorganized units in Madras became 90 against previously existing 231 units. The annual production per hen in Andhra comes to 55—83 and in Madras (Kallupatti block) 34—50. The above data indicate the scope for improvement both in production and supply of eggs.

Status of Progress Records.

4.9. The field reports of the P.E.O. Officers reveal that the production data given in the progress reports are not dependable. There is very often under-reporting of production deliberately done by the operators of the units to reduce the burden of free-supply of eggs for supplementary feeding. The records are, at present, maintained rather unsystematically. These should at least be checked more often.

4.10. *Supplementary feeding as an incentive for poultry production.*—In the programme as it is implemented in U.P., there is another factor which acts as a handicap. The poultry programme does not get enough impetus because egg is not universally an item in the menu of the mid-day

TABLE—2
Production and distribution of eggs

Item	Andhra Pradesh		Madras	Orissa*
1	2	3	4	5
1. Year	1962-63	1963-64	Till 1964-65	Till June, 64
2. Size of unit (Hen & Cock)	20+3	20+3	..	..
3. No. of units	297	488	231 (upto 30-9-64)	410 (+60)†
4. No. of units reorganised	..	..	90	..
5. No. of eggs produced	3,24,077	8,10,204	6,00,805	12,95,729
6. No. of eggs distributed/supplied	1,98,114	5,17,425	5,74,064	9,58,740
7. Production per unit (Nos.)	1,091	1,660	..	..
8. Distribution per unit (Nos.)	667	1,060	..	..

Source : State Evaluation and Progress Reports.

*In Orissa 3,31,328 eggs were sold, 55,565 chicks were produced and 3491 individual units were established upto June 1964.

†Under construction.

TABLE—3

Targets and achievements in Poultry in *Uttar Pradesh*—under Expanded and Applied Nutrition Programmes.

Expanded Nutrition Programme (till 1963-64)

Item	Target	Achievement
I	2	3
1. No. of poultry production units established	40	40
2. No. of chicks produced at these units	16,000	29,798
3. No. of birds sold from the units	16,000	20,145
4. Supply of birds to breeders at subsidised rates	16,000	12,317

(Source : State Progress Report)

Applied Nutrition Programme

Year	Poultry breeders trained		Day old chicks distributed		Two months old birds supplied	
	Target	Achievement	Target	Achievement	Target	Achievement
I	2	3	4	5	6	7
1962-63	1200	1200	45,000		60,000	10,315
1963-64	1520	903	57,000	29,026	75,000	79,871
1964-65	2320	519	116,000	11,449	87,000	28,759

(Source : State Progress Report)

TABLE—4

Production of eggs by size of unit in Kallupatti block of Madras.

Size of unit (Hen & Cock)	No. of months in operation	No. of units	No. of eggs produced	Actual production per unit in a year (Nos.)
I	2	3	4	5
60+6	22	3	11,282	2,051
60+6	21	8	31,288	2,235
60+6	20	5	18,703	2,244
20+3	15	4	4,989	998
20+3	9	4	2,708	903

(Source : Block Veterinary Assistant Surgeon's Records)

meal under the Supplementary Feeding Programme. Even for the vulnerable groups *i.e.* expectant and nursing mothers, school and pre-school children, egg consumption does not seem to be always recommended under the mid-day meal. It is not firmly known as to whether in the areas where egg does not occur in the mid-day meal menu, this item has never been kept in the menu, or it was initially tried and then cut out from the menu because of resistance on the part of the people. Some of the discussions with the officers concerned indicate that it was never tried at all. To that extent, the programme of the poultry and egg production was not formulated on the right lines because the ultimate objective of the production programme is to improve nutritive consumption. Naturally, the production programme will not get enough support if consumption of item like egg is not encouraged. It is not a good reflection on the planning of the programme if poultry and egg production is not integrated with the other aspects of the programme. There is every need to encourage local consumption of such nutritive items.

Pisciculture

4.11. In both Madras and Andhra, the pisciculture programme is implemented in the panchayat tanks; while in U.P., in addition to panchayat tanks, private persons owning tanks were also encouraged to take to pisciculture. They were given financial assistance from block funds. Such assistance, if provided in other States also, will help the spread of the pisciculture programme.

4.12. The achievements in pisciculture are indicated in the tables below (Tables 5 & 6), data for which have been culled out from the progress reports of the four States:

TABLE—5
Progress of Pisciculture

State	No. of tanks selected	Water area (acres)	No. of tanks renovated	No. of fingerlings stocked (lakhs)	Quantity of fish exploited (kg.)	Quantity of fish distributed (kg.)
1	2	3	4	5	6	7
1. Andhra Pradesh (till 1964-65).	136	..	..	..	1.5 lakhs	75,000
2. Madras (till 1964-65).	202	1744	14	53	1.2 lakhs	1.2 lakhs
3. Orissa (till June 64).	568	1676	166	29.5	..	52364*

*Upto Dec. 1964.

TABLE—6

Targets and achievements in Pisciculture in Uttar Pradesh

Programme	Year	Water area (acres)		No. of fingerlings stocked (lakhs)		Fishermen to be trained	
		Target	Achievement	Target	Achievement	Target	Achievement
1	2	3	4	5	6	7	8
Expanded Nutrition Programme	Till 1963-64 .	800	496	30.00	11.14	250	250
	1964-65 .	800*	223	16.00	4.45	..	..
Applied Nutrition Programme.	1962-63 .	1000	39	20.00	0.79	680	680
	1963-64 .	760	614	35.20	12.29	No target	..
	1964-65 .	..	846	35.20	16.92	No target	..
TOTAL A.N.P.		1760	1499	90.40	30.00		

*Cumulative.

Judged against the targets given in the Plan of operations, Andhra has fulfilled its targets, and performance in Madras is also quite satisfactory. Only in Orissa and U.P., the programme has rather lagged behind.

4.13. The technical details of implementation of the programme, particularly in respect of measures like dewatering of tanks, charging with fingerlings, maintenance and exploitation, etc. are not uniform in these States. In U.P., the fingerlings are supplied at subsidized rates to the panchayats and individuals; thereafter technical assistance for exploitation of the stocking tanks is provided at the cost of the owners. The watch and ward function in respect of tanks is the owner's responsibility. But, in Andhra, the responsibility for taking measures like dewatering of tanks, charging with fingerlings, maintenance and exploitation, etc. is assigned to the officials of the Fisheries Department at various levels. For attending to day-to-day work connected with this programme, one Assistant Inspector of Fisheries is provided at the block level. A similar functionary also exists at the block level in Madras. The addition of a functionary like Assistant Inspector of Fisheries at the block level reflects a well conceived approach to the solution of the problem of inadequate staffing at the block level specially for pisciculture work. In States like Madras and Andhra where many of the tanks are owned by the Government, the case for having such a functionary is even stronger. Where, as in U.P., there are many privately owned tanks, the owners may be charged for the technical assistance rendered to them, as this is likely to make them interested in, and watchful of the ultimate results.

Supply of Fingerlings.

4.14. One of the serious difficulties in the promotion of the pisciculture programme relates to regular and adequate supply of fingerlings. This can be ensured only if there are adequate nurseries. Only in Andhra, the arrangements in respect of nurseries are adequate. In Madras, fingerlings are supplied after collecting them from rivers. In U.P., the supply is from a number of breeding centres. But the number of such centres is not adequate; and they can supply only one-third of the target. In Orissa also, the supply is not adequate. Urgent attention needs to be given to the supply of fingerlings.

4.15. The price charged for the fingerlings is another matter which has raised problems. According to plan of operations, the pisciculture units are expected to be supplied fingerlings free by the Fisheries Department. But, in Andhra, charges have been made by the Fisheries Department for supplying fingerlings. In fact, field observation in one of the blocks reveals that tanks were charged with 39,000 fingerlings in the first year and 25,000 in the third year. The decline is attributed to the enhanced rate charged by the Department. In U.P., fingerlings are supplied at a concessional rate, but on the condition that one-third of the catch should go to the supplementary feeding programme. The panchayats, however, have preferred not to avail of the concessional price of fingerlings; instead they have purchased them at normal price so as to avoid the obligation of supplying free one-third of the catch for the supplementary feeding programme. The lacunae in the system seems to be in working out the economics of the concessional rate *vis-a-vis* the stipulation of free supply of one-third of the catch. Perhaps, the ratio of one-third is on the high side and leaves very little inducement. Wherever such concessions are given, the advantage from the concession has to be balanced against the disadvantage resulting from the imposed condition regarding free supply.

Irregular and Indivisible nature of catch.

4.16. A basic problem faced in the feeding programme relating the pisciculture has been the irregular and indivisible nature of the catch. Sometimes, catches are very substantial in size, whereas at some other times they are too inadequate. Once the catch is large, it has to be disposed of quickly because of the perishable nature of fish and non-availability of storage facilities. All these have made for uncertainty in regard to the availability of quantity of fish in the supplementary feeding.

Training of Fishermen.

4.17. Adequate attention also needs to be given to the training of fishermen. In Madras, there is no training programme for fishermen. Training was given to panchayat presidents, which did not prove functionally very useful. Because of lack of training for fishermen, VLWs had to get men from the Fisheries Department for catching fish, etc. Not only this procedure was arduous, but also it meant delay in the feeding programme. In U.P., a training programme exists for fishermen and as an incentive for their labour, they are provided with one-third of the catch. Some such arrangement would be operationally useful.

Availability of suitable tanks and their controlling rights.

4.18. Paucity of suitable tanks is also a limiting factor in the extension of this programme. This has been reported from Madras. Sometimes there is delay also in the selection of tanks, as has been reported in the State Evaluation Report of Andhra. Even if suitable tanks are there, trouble comes up if the agency owning the tank is different from the agency entrusted with the programme implementation. In Orissa, Mahila Samitis have faced this problem rather acutely and have been suggesting that they should be given controlling rights in the panchayat tanks so that they would have no difficulty in fully carrying out the programme of pisciculture.

Horticulture

Village Gardens.

4.19. Among the four States, the village/community garden programme has not been taken up under the A.N.P. in Andhra and Orissa. In the other two States, the achievement figures are given below. These show that Madras has recorded the best performance in respect of this programme. The proportion of the ANP villages having such gardens, their area, the arrangements made for irrigation all indicate a commendable effort by the Panchayats and the people. In U.P., the number of gardens started is large and it is hoped that these will be improved through irrigation arrangements and more will be started.

State	No. of villages under A.N.P.	No. of village gardens started	No. functioning	Area proposed to be covered (acres)	Area covered (acres)	No. of wells sunk	No. of pump-sets installed
Madras	380	138	112	540.93	369.92	76	56
U.P.	3279	N.A.†	197	N.A.	472.00	N.A.	N.A.

4.20. Among the difficulties that have hampered the starting of village gardens, the most important one is non-availability of land. Generally, from the angle of viability, an area of about 5 acres of land is recommended for a village garden; and it has been suggested that panchayats should make the land available free for these gardens. These expectations have not, however, been generally fulfilled. The real difficulty is that cultivators do not like to make a free donation of land which is good enough for horticulture. They are more willing to give some land for the school gardens partly because the size of land required is small and partly because they have a greater consideration for the teaching institution. Under the circumstances, this programme can work better in villages where there is community land under the ownership and control of the panchayat. In U.P., many village panchayats could not secure suitable lands. It is apprehended that until the consolidation of holdings is completed, panchayats will not get land for this purpose. Culturable gaon samaj lands

are already leased out or under the possession of other occupants. In Madras, panchayats have been trying to use 'Poramboke' (public) lands; but these require a good deal of investment before they can be fit for cultivation. The Government gave assistance to the extent of Rs. 300/- per garden (3 to 5 acres) for fencing, levelling and other improvement; but the amount was found to be inadequate and had to be raised to Rs. 120/- per acre subject to a maximum of Rs. 600/- per garden.

4.21. *Lack of irrigation facilities* either because of distance from the electricity transmission lines or because the wells or other works on which pumpsets could be installed, were non-existent is another difficulty. Some times, the size of the garden is not large enough for the full utilization of pumpsets.

4.22. In developing the programme of village gardens Madras has successfully utilized the *village volunteer force* in reclamation work. This can be suitably tried in other areas also.

4.24. The following table shows, at a glance, the *actual* progress programme relates to *enforcement of prescribed cropping pattern*. In the formulation of the programme, mention has been made of the general cropping pattern expected to be followed on the village gardens. Of course, the State Government allows a certain amount of discretion to the panchayats in making deviations from the prescribed pattern. It is reported that in Madras, the cropping pattern actually followed in village gardens more or less corresponds to the prescribed one. The panchayats did not exercise their discretion in the matter of cropping pattern, and consulted the Nutrition Officer, Extension Officer (Agri.) and the Animal Husbandry staff. As a result, no serious deviation from the prescribed cropping pattern has occurred in the village gardens. Wherever deviation has taken place, it is generally in the direction of devoting more land to cash crops. The motive behind this is to earn larger revenues for the panchayats. In Madras, till now no *restriction* has been specifically imposed *on the extent of cultivation of cash crops* on village gardens; but the Government is now reported to be considering this question.

School Gardens.

4.24. The following table shows, at a glance, the *actual* progress achieved in the school gardens programme:

State	Target	Achievement	Area
	(Units to be started)	(Units started)	(acre)
Andhra	200	171	..
Madras	348	318	78.9
Orissa	..	460	658.9
U.P.	300	370	572.0

In Andhra, 83 new wells have been sunk and 59 old wells renovated; further, 40 electric motors and 60 oil engines have been supplied. 27 of the electric and 58 of the oil motors are reported to be in operation. In Orissa, 258 wells have been dug upto June, 1964 and another 120 were

under construction. The progress report from U.P. shows under horticulture distribution of about 35,225 papaya plants, and 32,408 banana suckers. Further, legumes are shown to be sown over 19,708 acres in kharif, 48,288 acres in Rabi and 1,786 acres in zaid. On the whole, the programme has made better headway in Madras. This is partly explained by the fact that this State had a long experience in running the school mid-day meal programme; and the linking of the school gardens programme with the mid-day meal programme gave fillip to both the elements in the programme operation.

4.25. The above data definitely show that a good beginning has been made in the starting of school gardens. If the progress has not been faster, it is because of bottlenecks like non-availability of land, lack of irrigation facilities, etc. The bottlenecks are more or less the same as those discussed in the section on village gardens. The State Evaluation Report of Andhra mentions that in a good number of cases, the panchayats could not secure the necessary lands for establishing the school gardens. One of the suggestions put forth for speeding up the pace of the school gardens programme, is to make the stipulation regarding the minimum size of land for the garden more flexible. The rigid application of this clause (2 acres or some such size) deprives the schools of the benefits of the programme even if they have the eagerness to go ahead with this programme and can muster the necessary talent, just because they are not able to secure land of the minimum prescribed size. As a result, the children of such schools are deprived of the education in gardening and thus become ineffective as carriers of change in their own homes.

4.26. Delay in the sinking of wells, lack of supply of oil engines and pumpsets are also mentioned as factors impeding the programme. And, in this respect, the school gardens programme is at disadvantage *vis-a-vis* village gardens programme.

4.27. In order to encourage easy acceptance of this programme, fertilizers are given free or at nominal cost in Andhra and U.P. Demand for fertilizers is, however, dependent on the availability of adequate irrigation facilities. In U.P., for example, demand for fertilizers has been nominal because irrigation facilities are non-existent.

4.28. It must be stressed in this connection that the primary purpose of the school gardens programme is educational. Considerations of economic viability should, therefore, be given a secondary place as long as land available is enough for imparting training to each child on roll. From this angle, an area of 50 sq. ft. per child is considered sufficient by the F.A.O. experts. Schools which are able to secure land on this scale, should be allowed to have the full benefits under the school garden programme of the A.N.P. Further, they should be able to develop irrigation facilities for this garden.

4.29. Finally, both for the village gardens and the school gardens, the cropping patterns to be prescribed in different areas need to be worked out more systematically, keeping in view the agro-climatic factors, the quality of land, the composition of the diet in different seasons and the direction of its modification.

CHAPTER V

Supplementary Feeding Programme

Programme Achievements.

5.1. Supplementary feeding of the vulnerable population groups, namely, expectant and nursing mothers, pre-school and school children has, from the beginning, received emphasis in the nutrition programme. The achievement in respect of this aspect of the A.N.P. is revealed by the figures of eggs, fish, and fruits and vegetables distributed in the A.N.P. blocks. The available data are inadequate; but whatever is available is summarised in Table 7 below:

TABLE—7
Eggs, Fish, Fruits and Vegetables distributed for feeding

State	No. of blocks	Eggs distributed * (No. 000)	Fruits and vegetables distributed (Kgs.)	Fish distributed (Kgs.)
1	2	3	4	5
1. Andhra . . .	20	716	N.A.	75,000
2. Madras . . .	7	574	1,06,956	1.2 lakh
3. Orissa . . .	74	959	All fruits and vegetables produced in school gardens utilised for feeding school children.	52,364
4. U.P. . . .	69	N.A.	N.A.	N.A.

Though the scheme for this programme has been drawn up in all the States, it is only in Andhra and Madras that the supplementary feeding programme has been working well. In Orissa also, it has been working fairly satisfactorily. Madras has to its credit a successful programme of mid-day meals for school children; and that experience has helped in the organisation and implementation of its supplementary feeding programme under the A.N.P. In U.P., the feeding programme is mainly confined to milk distribution. Even this had to be discontinued in many centres on account of non-maintenance of proper account. Feeding of fish and egg has not made any headway in U.P.

Difficulties in the Operation of the Programme.

5.2. The effective operation of this programme has been suffering on account of the difficulty in the procurement of adequate quantities of the ingredients of the meal. There is resistance on the part of the panchayats and other production units to parting with a portion of their produce free

*Figures for Andhra relate to the total of 1963 and 1962-63-64 only, while those for Madras and Orissa to the cumulative totals upto March 1965 and June 1964, respectively.

for supplementary feeding. There is also another problem. What is distributed is not always consumed by the vulnerable groups for whom it is meant. One way of remedying this situation is to distribute the items in cooked form and ensure consumption on the spot. But, this is not a perfect solution. Mothers will not accept the supplementary feed if it is meant only for them. They generally come along with their children to the feeding centres and would not like to consume these items without first giving a share to their children. Perhaps, a family approach in supplementary feeding would be more effective. It is understood that this approach has recently been adopted in U.P.

Accommodation for the Mahila Samiti

5.3. The key organization for this aspect of the programme is the Mahila Samiti. The members of Mahila Mandals, assisted by Gram Laxmis, are responsible for the preparation and distribution of the meal to the beneficiaries. Accommodation for the feeding centre has posed another problem. At present, the expectant and nursing mothers are generally fed in the Mahila Samiti centres, the pre-school children in the Balwadis or schools, and the school children in the school buildings. This arrangement implies that Mahila Samitis have buildings of their own, which is not always the case. Absence of a permanent meeting place or house of their own is reported to be the greatest handicap in achieving an increase in membership of *Madhar Sangam* (Mahila Samiti) in Madras; and this also partly explains why it has not yet been possible to ensure the existence of a Mahila Samiti in every village in this State. The position is different in Orissa. In order to ensure that each Mahila Samiti has its building, the Orissa Government gives financial assistance to the extent of 50% of the cost of building and only those villages are selected for this programme which have Mahila Samitis. The practice in Orissa is worth emulation by the other States.

5.4. For a successful working of the feeding programme, it is desirable that each village under the programme is initially covered by a Mahila Samiti and the Mahila Samiti is assisted by the Government to construct its own building as early as possible. Commenting on this problem in Andhra, the State Evaluation Committee have recommended that "a separate building should be provided to enable the members of the Mahila Mandals to assemble and arrange for the proper distribution of the nutritionally valuable foods".

5.5. The pre-school children are generally taken to the school building and fed there. At any rate, that is the practice in Madras where the Bal Sevika, a trained local woman, collects them on the feeding days and takes them to the school for mid-day meal. The alternative of feeding in the 'Bal Wadis' is not perhaps operationally as sound, because school gardens contribute to the supplementary feeding and at any rate school children have to be fed in the school building.

Selection of beneficiaries.

5.6. Even when there is adequate supply, the crucial question remains as to who should be the recipients of these benefits. The beneficiaries are expected to be selected on the basis of a nutritional survey conducted before the operation of the programme in the villages. The lists of beneficiaries,

so finalised, are expected to be periodically revised. But, this whole procedure has yet to be adopted in any of these States. One extreme is Madras, where there is no selection of beneficiaries at all; all pre-school children, expectant and nursing women, are made eligible for the benefits. Of course, gram sevikas and members of Mahila Mandals periodically prepare fresh lists of expectant and nursing women and pre-school children. In U.P., the selection of beneficiaries is done by the village community on the advice and guidance of the Panchayat Pradhan and Medical Officer of the Primary Health Centres. The idea is to make the people feel that the A.N.P. is their own programme. In Andhra, 30 pre-school children and 15 expectant and nursing mothers in each village are selected by the Medical Officer of the Health Centre and finally approved by the Regional Health Officer. Unfortunately, these lists had been prepared in the initial stage and never revised. This point has already been discussed in the Chapter III under the 'Role of Health Services'. It may be added here that the approach to the selection of beneficiaries will have to be related to the objectives of the programme and the strategy of extension devised under it. There can be different approaches, as has been pointed out in Chapter II as long as the objectives are not more clearly spelled out.

CHAPTER VI

Health and Nutrition Education

Achievement data:

6.1. Spread of health and nutrition education is one of the most important objectives of the A.N.P. But it is a most challenging task and shows the least tangible results. Food habits and preferences are slow and difficult to change. Without corresponding changes in attitude, apparent modifications do not strike permanent roots. These are among the reasons why this aspect of the programme should receive the best of attention in planning as well as extension.

6.2. Progress indicators for this sector do not find a place in the progress reporting proforma used at present. The evaluation in Orissa and Andhra did not also aim to collect specific data on the progress achieved in this sector. Only in U.P., the Evaluation Unit, in the course of its detailed survey, collected some information on the extent people had right knowledge of nutrition and adopted the right practice in respect of the cooking and eating of certain food items. The table below presents figures of percentage of female respondents having the 'right knowledge and right practice' as well as of those having the 'wrong knowledge and wrong practice' in respect of some dietary items and practices. Data are presented both for the base-line survey (April to July, 1962) and for the interim evaluation survey (December, 1964 to January, 1965). These figures are, however, to be read with caution. The comparison between the base-line position and the interim evaluation position is not strictly valid. The reference periods in the two rounds did not cover the same months. The base-line survey had April to July, 1962 as the reference period, while the interim evaluation survey had December, 1964 to January, 1965. Further, while some of the blocks are the same, the samples of the two surveys did not cover exactly the same blocks. The comparison could have been better had the data been tabulated separately for only those blocks which were common in the two surveys. The figures quoted here are, therefore, to be treated as illustrative.

TABLE—8
Comparative knowledge of the various alternative items of food and their practices

Responses	Right knowledge and right practice		Wrong knowledge & wrong practice	
	Baseline	Interim Evl.	Baseline	Interim Evl.
	%	%	%	%
1	2	3	4	5
1. Green leafy vegetables <i>vs.</i> potato and other vegetables	30.0	59.6	37.5	37.9
2. Hand pounded sela rice <i>vs.</i> hand pounded arwa rice	47.5	65.2	36.3	30.0
3. Flour with 'chokar' <i>vs.</i> flour without 'chokar'	7.5	16.1	85.0	79.5
4. Rice with gruel <i>vs.</i> rice without gruel	87.5	91.3	6.3	5.0

The data for 'right knowledge and right practice' tend to indicate that there has been improvement in nutrition consciousness and knowledge during the programme period. This improvement is noticeable in respect of items like green leafy vegetables, parboiled rice, the cooking of rice, and even wheat flour with bran. But, in respect of the item 'red enamel coated coarse rice vs. red polished white rice' 'wrong knowledge and wrong practice' seem to have increased. Such data, however, indicate that improvement in knowledge and practices are not backed by consistent changes in attitude.

Role of the Publicity Department.

6.3. While quantitative data to throw light on the level of nutrition education and knowledge among the people are not available at present, one can examine the approach adopted to organizing this part of the programme and the items of activity pursued. This will indirectly give an insight into the character and quality of the programme, in this sector. The broad pattern followed in programme implementation has been to associate the Information and Public Relations Department with the Health Department of the State Government for publicity and educational work. For example, in Andhra, the Public Relations Department was specifically asked to collaborate with the Health Department in arranging and supervising the publicity work to this end. At the district level, the District Public Relations Officer was entrusted with the organisation of exhibitions and publicity through posters and audio-visual equipment. In Orissa, however, it appears that the Information and Publicity Department has not been fully drawn in. There the view has been taken that "Health and nutrition education of the rural people is the responsibility of S.E.Os., Primary Health Centres and lady VLWs".

Communication Media.

5.4. Among the different communication media used for nutrition education, cinema shows are reported to be the most effective. In Madras, four cinema trailer units have been provided per block; and these units work for one month in each block. Each village in the A.N.P. area is shown films on nutrition education, at least three times a year. The mobile cinema van from the district headquarter also visits the villages. The Rural Extension Training Centres also supply films. In Orissa and Andhra, film shows are held but not as frequently. In U.P., the projection equipment is reportedly available only at the State level.

6.5. While film shows have proved an effective medium for the dissemination of health and nutrition education, the number of suitable films available in local language is far from adequate for carrying the message of the programme to each villager. Inadequacy of films is reported particularly in Madras. In Andhra, short-supply of raw films was the bottleneck. As a result, adequate number of films for exhibition in the blocks could not be prepared. There is every justification for allocating funds for making a good number of films and colour photographs suitable for exhibition in the villages. These films and colour photographs should depict the typical nutrition deficiencies prevalent in the areas and also show what would be the corrective balanced diet. Their exhibition will have a visual impact on the viewers and if repeated, will contribute to the transmission of the message and knowledge of nutrition education and better dietary habits to the rural people.

6.6. Besides film shows, other media such as posters, folders, and pamphlets have been used also for imparting nutrition education. In Madras, sanction was accorded to an expenditure of Rs. 10,000 per annum for this purpose. Colour folders entitled 'Our Food', 'Food is better than Medicine' etc. were printed in Tamil and these along with literature on 'Simple Food Recipe' and 'Menus of Cheap Diet' were supplied.

6.7. In the interest of a better impact of the health and nutrition education programme, adequate publicity of good results has to be arranged. "The Department of Information and Public Relations should ensure adequate supply of posters, literature and other publicity materials to all the blocks where the programme is under implementation. Further, a bulletin or brochure on the working of these programmes should be distributed among the blocks concerned periodically at least once a year". These recommendations of the Andhra Evaluation Report apply with equal force to the other States also.

CHAPTER VII

TRAINING

Progress

7.1. The master-plan of operations for the Applied Nutrition Programme strongly emphasizes the need for training of various categories of functionaries—both official and non-official—who would be implementing the programme in the field. Accordingly, a Sub-Committee of the Central Coordination Committee on the A.N.P. was formed. The Sub-Committee has worked out the details in regard to the categories of functionaries required to be trained, their nature and place of training, priorities in training etc. This report was circulated to the State Governments in October, 1962. The State Governments were requested to draw up schedules of their training programme keeping in view the need to complete the training of all the functionaries under the programme by 1964. Further, in order to provide the nucleus of trainers in the States necessary for taking up the training of field-level functionaries, the Ministry of Community Development and Cooperation arranged from April 1964 onwards, the training of Public Health Instructors of Gram Sevak Training Centres, Nutrition Instructresses of Gram Sevika Training Centres/Mukhya Sevika Training Centres, at three training institutions—Allahabad Agricultural Institute, Faculty of Home Science of the University of Baroda and the Avinashilingam Home Science College at Coimbatore. In all, 26 Public Health Instructors and 33 Nutrition Instructresses were trained in one-month courses at the above Institutions. The Government of U.P. had already trained 22 Public Health Instructors and 8 Nutrition Instructresses at the Provincial Hygiene Institute, Lucknow. As many as 183 other Instructors were trained in 15 days courses by 1964 from the various States. Again, in February, 1965, the Sub-Committee on Training reviewed the progress achieved under training programme and suggested that more courses of 15-days duration should be organized at each of the three regional Institutions during April/June, 1965 so that four Instructors from every Gram Sevak Training Centre and two Instructors from every Gram Sevika Training Centre would have the benefit of training. The four Instructors may come preferably from agriculture, animal husbandry, social education, or panchayati raj sectors.

7.2. The State Governments made their own arrangements for the training of Medical Officers in Public Health Centres. Data on the progress of training of the other field-level functionaries show that so far more than 15,000 persons have undergone such training in the country. U.P. alone accounts for 6,938 of these and Orissa for 2,576. Related to the total number to be trained as per the subsidiary plan operations, however, the number actually trained in the country shows an achievement of about 30 per cent.

Scope for improvement in Training Programme.

7.3. *Syllabus*.—The field reports on the nature and quality of training suggest scope for improvement in the training programme in a few directions. First, to ensure uniformity in the scope and content, detailed syllabi should be worked out for each category of training. While this is being done in the light of the recommendations of the Training Sub-Committee of the Technical Coordination Committee, in Andhra Pradesh no syllabus has yet been prescribed. In preparing the syllabus the help of the concerned departments should be sought; and the syllabus so prepared should be periodically examined and revised in the light of practical field experience.

7.4. *Practical bias*.—Secondly, more stress should be given on job-orientation and the practical aspects of training. More field trips and field studies should be arranged for imparting the needed practical bias. That this has not been done adequately is mentioned in the evaluation note received from the U.P. Government in the following words: "the training stresses upon general principles of nutrition except for poultry keeping and pisciculture". And even in the poultry training programme, according to this note, "the training mostly dwells upon the theoretical aspects with the result that practical aspects of the same are neglected. This is one of the reasons why about 50 per cent of the persons trained in this aspect have not taken up this programme. What is mostly stressed are the economic gains. Little is taught on the management aspects".

7.5. *Reduction of wastage: Selection of right persons*.—Field reports reveal that in Andhra, persons trained for poultry keeping did not undertake poultry farming. Training for pisciculture given to non-fishermen in U.P., or even to fishermen in Andhra, did not directly benefit the pisciculture programme. Again, the training given to representatives of Mahila Mandals and Gram Laxmis in Andhra was not effectively utilized for the supplementary feeding programme. These illustrations suggest the need of selecting right persons for training. Selection of trainees needs to be done carefully if wastage is to be avoided and the training is to lead to improvement in programme implementation. In order to attract and draw right men for training, scrupulous and pains-taking attempts should be made to identify those who are really interested in the programme and are not coming forward just for the sake of the stipend. To attract such persons, if it is necessary to raise the amount of stipend, it is better to do so and it may be more economical on balance.

7.6. *Wastage through transfer of staff*.—Considerable wastage of training and set-back to implementation also occurs on account of frequent transfers of the trained staff. In U.P. according to the State Evaluation Note, "the transfers of trained staff are often too frequent". This statement is confirmed by the data collected during the course of the U.P. survey, which are summarised below. Table 9 gives the number of trained persons transferred, number of trained persons replaced, and finally, the percentage depletion in the trained strength. Figures are given separately for males and females and by category of workers.

TABLE 9

Extent of depletion of trained staff in Phase II Blocks because of transfers in Bastiand Gorakhpur districts.

Category of workers	No. of trained persons transferred			No. replaced by trained staff	Deplet on (Nos.)	Extent depletion % of (6, to 4)
	Within programme Block	Outside programme Block	Total			
1	2	3	4	5	6	7
<i>Male staff</i>						
1. B.D.Os.	3	7	10	7	3	30.04
2. ADOs, ADG (AH) VAS	8	9	17	10	7	41.2
3. V.L.Ws.	11	8	19	10	9	47.4
Total male staff	22	24	46	27	19	41.3
<i>Females staff</i>						
1. ADO(W)	3	5	8	4	4	50.3
2. Health Visitors	..	1	1	..	1	100.0
3. Gram Sevikas	1	2	3	2	1	33.0
4. Midwives	3	1	4	2	2	50
Total female staff	7	9	16	8	8	50.0
Grand total	29	33	62	35	27	43.5

Taking all the male and female staff together, depletion has been of the order of 44 per cent, after allowance has been made for replacement by trained staff. For the female staff, the figure is slightly higher. The effect of transfers is noticeable more in the categories of staff like VLW, Health Visitors, ADOs and Midwives.

Reserve staff for training and duration of training

7.7. In implementing the training programme, the difficulty reported most often relates to the non-availability of personnel to fill the vacancy for the period of training. This happens because there is no provision for reserve-field staff to be put in the resulting vacancies. As the administrator does not like the field work to suffer, he is often reluctant to send staff for training, specially if its duration is long. While the duration is more or less uniform in all the States and follows the pattern prescribed in the Master Plan of

operations, in Andhra, the duration is, relatively speaking, longer as can be seen from the data presented below :

Category of trainees	Duration of training (Days)		
	Andhra	Madras	U.P.
1. School teachers	45	7	7
2. Panchayat Presidents	N.A.]	3	14
3. Women workers and Gram Laxmis	60	14	14
4. Members of Youth Club	N.A.]	7	14
5. Poultry men	15	10	10
6. Poultry breeders	6 weeks	7	7
7. Poultry attenders . . . . .	..	14	..
8. Fishermen	15	7	10
9. Gardeners	N.A.]	10	..

For school teachers, the duration of the prescribed training is 45 days. This needs to be cut down.

Non-official trainees and place of training.

7.8. It is reported from the field that the non-official trainees find it inconvenient to undergo training at distant training centres. Their difficulty is genuine and needs to be removed as far as possible. The timing of the training should also avoid, as much as possible, the busy seasons of the usual activity of the non-officials to be trained.

Assessment of the training programme to be made a regular built-in feature.

7.9. Except for some attempt in U.P., no proper system has been evolved for evaluating the effectiveness of the training programme by assessing the reactions of the trainees and the trainers. Such assessment could be undertaken in other States also. It helps in the improvement of the training, and as such should be built into the training programme in each State.

CHAPTER VIII

SUMMARY AND SUGGESTIONS

8.1. At the instance of the Ministry of Community Development and Co-operation, the P.E.O. undertook a quick 'current evaluation' of the Applied Nutrition Programme in the States of Andhra, Madras, Orissa and U.P. The main focus of this evaluation has been on the operational aspects of the programme, the problems faced in the field and the directions in which programme implementation could be improved. Use has been made in this report of some of the findings of the evaluation surveys conducted by the State Government agencies in Andhra, Orissa and U.P.

Objective and Content of the Applied Nutrition Programme

8.2. The Applied Nutrition Programme is a cooperative undertaking, involving implementation responsibility of the Government of India and the participating States and aid commitment of the UNICEF, FAO and WHO for the provision of vehicles, equipment, supplies, stipend and technical advice. The programme was first launched in Orissa in 1959 as Expanded Nutrition Programme and later taken up in Andhra and U.P. It was reformulated in its present name and initiated in Madras in 1962. In early 1963, the operational contents of the A.N.P. were formulated jointly by the Government of India and the States, on the one hand, and the three International agencies on the other. The Ministry of Community Development is coordinating the programme at the national level. It is presently being implemented in 183 blocks and 73 more blocks are proposed to be taken up in 1965-66. The programme has exceeded the original expectation of coverage, which was 222 blocks by 1965-66. The phase of the programme covered in this evaluation may be categorised as one of pilot project which has been reflected in a flexible approach in its conception and administration. Four groups of activities have been taken up, production of nutritive foods, supplementary feeding of vulnerable groups, nutrition education and training of functionaries. There has been an appreciable amount of preparatory and substantive work done under the programme. Problems and difficulties have however been arisen as they usually do in programmes involving a substantial extension component. These have been highlighted in this Report.

Emergence of conflicts in the operation of the programme and need of clarification of the strategy.

8.3. After a few years of working of the Expanded Nutrition phase of the programme, certain fundamental conflicts came to the fore. These still persist and centre round a few issues which may be formulated in general terms as: whether the A.N.P. is basically a welfare programme designed to help the poorer and vulnerable sections of the people in having a better level of nutrition, or it is a programme with the primary objective of extension and education for raising the nutrition status of *all members* of the rural community, or the supplementary feeding and the production activities essentially demonstrational and educational or should they also stand the test of

economic activities and what is the best strategy for extension. These are questions which come up in most of the discussions on the objective and content of the A.N.P. and the answers in many cases are not the same. In fact, the three International agencies do not often speak in the same vein on these issues. It would help the growth and development of the programme if the three International agencies could iron out whatever differences they may have in their approach to, or emphasis on different objectives of this programme and the strategy to be adopted in future.

Need for fresh thinking on the extent better-off sections of the population are to be drawn in the programme.

8.4. The extent to which the better-off sections of the village community are to be drawn within the fold of the programme either in respect of the production activities or of the nutrition education does not appear to have been very clearly laid down. What is needed is the formulation of a strategy for reaching these groups without running into conflict with the welfare objectives of the programme.

Assistance and Funds for the A.N.P.

8.5. No special Central assistance was provided for the programme during the Third Plan because the A.N.P. was formulated after this Plan had been finalised. But, in the Fourth Plan, the programme should be included under the Plan schemes. This would help the State Governments in making necessary arrangements for implementation from now. Secondly, the time lag and delay in the receipt of vehicles, equipments and supplies needs to be cut down considerably. Thirdly, assistance to be channelled through the blocks should be provided for this programme in the block budget, according to a schematic pattern as has been done for the Community Development programme.

Programme Planning and Administrative Set-up

8.6. The initiative and adjustment that the State Governments had exercised in the early phase of the programme have been reflected in a flexible approach to programme planning and some aspects of administration. The methods and procedures for the selection of block areas and villages and the involvement and role of different agencies and organisations have not been the same or even similar in all the States. This shows that there has been a pilot project approach in the planning and implementation of the programme. The lessons that can be derived from the experience of working of different patterns have been analysed in this evaluation.

Need for maintaining contacts and links between the A.N.P. Blocks and the Training Institutions.

8.7. In Madras and U.P., the blocks to be covered under the programme were selected only in areas where the extension training centres were located. In Andhra and Orissa, other factors formed the basis of selection, such as the relative performance of blocks in developmental activities, existence of the Primary Health Centres, availability of funds in the block budget, local enthusiasm and good communication facilities. The procedure followed in the later years of the programme, especially in Madras and U.P., of selecting blocks adjacent to the training centres, has much to commend itself. A specific institutional support is provided to the programme by the training

centres which also provide technical guidance and supervision, besides receiving the feed-back from the field. Even when the programme reaches the phase of expansion in coverage, it will be desirable to work out a system for maintaining contacts and links between the blocks and the training institutions.

Need of fuller involvement of Panchayati Raj Institutions in the programme.

8.8. Both in the matter of selection of block areas and of finalizing the content of the programme, the Zilla Parishad and the Panchayat Samiti could be involved more fully than has been done in some of the States. Their participation in the preparatory stage would infuse in these organizations, a sense of responsibility and acceptance of the programme that would contribute to an improvement in its implementation.

Need for proper assessment of local resources.

8.9. The programme has generally suffered wherever areas were selected without fully taking into account the availability of local resources. An assessment of the nature and availability of local resources, physical as well as human, if undertaken prior to the finalization of area selection would, at least, forewarn the authorities about the existence or magnitude of this danger.

Need for nutrition surveys and working out balanced dietary pattern for each area.

8.10. To concretize the content of the programme and to crystalize the dietary pattern and the production programme to be propagated in the programme areas, surveys should be undertaken to identify the nutritional deficiencies and problems in different areas and demarcate those pockets where nutritional deficiencies are of larger dimension. In the actual formulation and execution of the programme, these steps have not generally been taken, partly because of the complexity of the job and partly because of an administrative approach to the problem. Attempts could, however, be made to get, at least, a notional idea of these nutritional deficiencies and problems both for the total population and for different socio-economic groups, and to formulate the programme on the basis of these data.

Need for more selective approach in spreading the programme over villages.

8.11. In Andhra, ten villages per block were selected presumably but not necessarily, on the basis of availability of resources and public participation. In Madras, all the villages in a block were considered suitable for the operation of this programme which resulted in dilution and inadequacy of returns. The methods of selection of villages followed in the States do not indicate that any definite strategy has yet been worked out for spreading the programme. It would help the programme, if initially it is taken up in villages where the physical, human and institutional resources are available and favourable, and the local bodies are keen and receptive.

Need for an effective coordination machinery.

8.12. At the State level, coordination is more or less well achieved through the State Coordination Committee. But, the situation is not very encouraging at the district level. Madras, no coordination committee has

been set up at the district level while in Andhra and U.P. meetings of district committees are not regular, nor very effective. Instances have been reported from the field which suggest the need for better integration and co-ordination of the working of the different agencies involved in the programme.

Need for assessment of work-load and strengthening of staff. .

8.13. The staff in the blocks and the Primary Health Centres, as well as those at higher levels are quite busy with their normal development work so much so that it has not been possible for them to find adequate time to do justice to the specific aspects of this programme. There is need for a proper assessment of the work-load of the staff, and where such a study justifies, additional staff should be sanctioned so that the agriculture, veterinary, poultry, fishery and health aspects of the programme are properly looked after and attended to. Further, the duties and responsibilities of the staff who would be giving part of their time to this programme should be fully defined and the channels of supervision streamlined.

Primary Health Centres need to be more effectively involved in the programme.

8.14. Though the Primary Health Centres are expected to play a very important role in identifying the important nutritional deficiencies, advising on the dietary patterns, and the nutrition training they have at best been involved only in the selection of beneficiaries for the supplementary feeding. In order to infuse a greater sense of responsibility and elicit better attention, the Medical Officer of the Health Centre should be made responsible for the preparation of the final list of beneficiaries, and the maternity assistant should be entrusted with the supervision of the distribution of eggs and fish to the beneficiaries, whenever possible.

Role of Panchayats.

8.15. Except in Madras, the panchayats have not played a very useful part in carrying out the A.N.P. In Andhra, they have almost no role to play as far as poultry and gardening programmes are concerned. Even in pisciculture, they have not evinced sufficient interest in the protection and maintenance of tanks.

Role of Mahila Mandals.

8.16. While in Orissa and Madras the Mahila Samitis have done a good job in the supplementary feeding programme, they have not been able to discharge their responsibility satisfactorily in U.P. and Andhra. In U.P., many of the feeding centres had to be closed down, one of the reasons for closure being that proper accounts could not be maintained by the Mahila Samitis. In Andhra, the lack of facilities like suitable accommodation, cooking equipment and inadequate supplies were ascribed for their poor performance. In Orissa, the Mahila Samitis have also been associated with poultry keeping and pisciculture. The role played by this organization in the A.N.P. in Orissa is remarkable in many ways.

Role of Youth Clubs.

8.17. The Youth Clubs, still in their infancy in many areas, are likely to take some time before they can actively help in the A.N.P. It may be

better at this stage to spell out the activities that the Youth Clubs can undertake to help the production programme operationally. The scheme of allowing a portion of the panchayat garden lands to Youth Clubs for growing vegetables and fruits of their own choice is worth trying in different areas.

Inadequacy of reporting and need for systematic progress analysis.

8.18. During the course of this quick evaluation, the absence of systematic progress data at different levels was acutely felt. The state of progress records as maintained at present is unsatisfactory. They can be maintained accurately, properly and regularly and made full use of, at different levels. The progress data reported from the block need to be periodically supervised and checked on the spot to ensure their accuracy. The progress reports need to be analysed systematically at the district and State level. The findings of such analysis should be made available every quarter and discussed by the coordination committee at the district and State levels. Besides this, informal evaluation of the experiences of the field personnel should be encouraged in the monthly meetings of the block staff. It may be stated here that systematic progress analysis helps the planning and implementation of the programme even more than it helps evaluation.

Production Components of the Programme

8.19. *Poultry*.—The production components of the A.N.P. are poultry, pisciculture and horticulture. All these activities have been undertaken in the four States. If the objective of the production programme is taken to be mainly educational, it is too early to assess the results in so far as these are reflected in an improvement of nutrition levels and consciousness of the people. For this evaluation, however, the more immediate and economic aspects of the operation of the production units have been kept in view. Accordingly, the criteria of evaluation of the units have been their economic viability, continuity in production, management efficiency and contribution to the feeding programme.

Adoption of the "deep-litter" system

8.20. The deep litter system being propagated for the poultry units appears to have, in spite of its superiority in production efficiency, certain disadvantages. These are the high cost of feed, higher (relatively to the open run system) investment required for managing the larger size which is recommended on grounds of economic viability, non-availability of cheap material for deep litter, and, lastly, the implied obligation of timely feeding to the caged birds. On the whole, the "deep litter" implies a specialised approach to poultry production and can be more easily adopted by those among the better-off sections that are interested in poultry farming. If, however, the objective is to encourage the poor and the weaker sections of the community to take to home production of eggs, a flexible approach may yield quicker results. Thus there need not be insistence on a specified size of the poultry unit which may be allowed some variation. Initially, the education aspect may be emphasized more than economic viability. Secondly, the pattern of assistance for the poultry units need not be made rigidly conditional on adoption of the deep litter system.

Selection of right type of persons and provision of financial assistance in kind.

8.21. In one State (Andhra) the persons selected as 'Custodians' to run the poultry units were not in many cases found to be interested in developing or continuing in poultry production. The persons selected for poultry keeping should have sufficient interest, time and capability to run the units on efficient lines. It may be better if the sanctioned stipend is given to the trainees in kind (in the form of birds valued up to the stipend amount). This helps the trainees to get started on poultry production immediately after they complete their training.

Need for replenishment of improved stock

8.22. There has been, in many units, a high mortality among the improved birds; and arrangements for the replenishment of the dead birds have not been very satisfactory either. Possible solutions to the problem could be, first, provision of more adequate and regular veterinary aid to the poultry units; secondly, supply of birds from the main centres; and lastly, encouraging a group of village units to have a common hatching programme at a convenient and nearby place. Greater efforts may be made to use fertile eggs of exotic birds for hatching purposes. A system of exchanging these eggs for desi eggs at appropriate exchange rates could be worked out.

Reasons for under-production of eggs.

8.23. Delay in the construction of poultry houses, supply of fairly old birds, non-replacement of very old birds, poor quality of poultry feed are among the important factors responsible for a relatively slow progress on the production side.

Supply of balanced feed to the poultry units

8.24. Getting balanced feed for poultry birds at reasonable price has often posed an acute problem. Among ways to tackle this problem locally, two can be suggested. Arrangements could be instituted in each block, for preparing standardised mixed feed and selling it to the poultry breeders at reasonable price; and/or the poultry breeders could be trained to prepare their own feed and supplied with those ingredients that are not available in the village.

Need for better management of the units.

8.25. That the management of the poultry units has not yet come upto a reasonable level of efficiency is indicated by the under-production in terms of number of eggs and under-performance in terms of supply of eggs for the feeding programme.

Status of Progress Records

8.26. Progress records are maintained rather unsystematically; and the production data given therein are seldom dependable. There is very often under-reporting of production deliberately done by the operators of the units to reduce the burden of free supply of eggs for supplementary feeding. The records should be checked scrupulously and frequently.

Nutritive consumption at the local level needs encouragement to create local markets for stimulating production.

8.27. In U.P., under the supplementary feeding programme, egg is not universally an item in the menu of the mid-day meal. The poultry production programme will not get enough support if local consumption of eggs is not encouraged. In U.P., it cannot be said to be integrated with the other aspects of the A.N.P.

Pisciculture

Financial and technical assistance for pisciculture.

8.28. The practice in U.P. of encouraging pisciculture in private as well as panchayat tanks through financial assistance from block funds, if provided in other States also, will help the spread of the pisciculture programme. Provision of one Assistant Inspector of Fisheries at the block level, as in Madras and Andhra Pradesh, reflects a well-conceived approach to the solution of the problem of inadequate staffing. Adequate supply of fingerlings either free or at concessional rates would go a long way to step up the production of fish. The advantage in off-take to be derived from the concessional rates has to be balanced against the disadvantage resulting from the imposed condition regarding free supply for supplementary feeding.

Need for adequate training of fishermen

8.29. Because of the absence of arrangements for the training for fishermen under this programme in Madras, difficulty was often experienced in arranging regularly for catch. Not only should fishermen be given adequate training in preference to other functionaries like panchayat presidents (in Madras); but also they could and should be given a portion of the catch as an incentive, (as in U.P.).

Horticulture

Problems in the implementation of the horticulture programme.

8.30. Non-availability of suitable land for village and school gardens is the most important problem in the spread of this programme. Other factors impeding it are: lack of irrigation facilities, distance from electricity transmission lines, delay in sinking of wells and lack of supply of oil engines and pumpsets. Sometimes, the size of the garden is too small for a full utilization of the pumpsets. It must be stressed in this connection that the primary purpose of the school gardens programme at least is educational. Considerations of economic viability should, therefore, be given a secondary place as long as land available is enough for imparting training to each child on roll. From this angle, an area of 50 sq. ft. per child is considered sufficient. Schools which are able to secure land on this scale, should be allowed to have the full benefits and assistance provided under the school gardens programme, including irrigational facilities.

Village volunteer force and the horticulture programme.

8.31. Madras has used, with great advantage, members of the village volunteer force in the reclamation work for village gardens. This can be tried in other areas also.

Cropping pattern for the gardens.

8.32. Both for the village gardens and the school gardens, the cropping patterns to be prescribed in different areas need to be worked out more systematically, keeping in view the agro-climatic factors, the quality of land, the composition of the diet of the people in the area in different seasons and the direction of its modification.

Supplementary Feeding Programme

Need for a family approach in supplementary feeding.

8.33. In Madras, Orissa and Andhra, this programme has been working well. The Mahila Samiti is the key organization responsible for the implementation of this programme. One of the operational problems in this programme is that mothers have a resistance to accepting the supplementary food if it is meant only for them. They generally go along with their children to the feeding centre, and would seldom like to consume the food given there without first giving a share to their children. Perhaps, a family approach in supplementary feeding, as recently adopted in U.P., would be more affective.

Accommodation for Mahila Samiti

8.34. It is desirable for a successful working of the feeding programme that each village under the programme is initially covered by a Mahila Samiti and the Mahila Samiti is assisted by the Government to construct its own building as early as possible so that it will have its own feeding centre.

Place of feeding for pre-school children.

8.35. Pre-school children may be fed in the school building, as is done in Madras. The alternative to feed them in the Bal-Wadis is not perhaps very sound operationally, because school gardens contribute to the supplementary feeding programme and, at any rate, school children have to be fed in the school building.

Problem of procuring the adequate quantities of food for supplementary feeding.

8.36. The effective operation of the feeding programme has been suffering on account of the difficulty in the procurement of adequate quantities of the ingredients of the meal. There is resistance on the part of the panchayats and other production units to parting with a portion of their produce of supplementary feeding.

Selection of beneficiaries.

8.37. The beneficiaries of the feeding programme were originally expected to be selected on the basis of a nutritional survey conducted in the villages before the operation of the programme. The list was to be periodically revised. This procedure has not been adopted in full in any of these States. It would be desirable to make a fresh approach on the basis of some quick survey. The advise and guidance of the village community, the panchayat and the Medical Officer of the Primary Health

Centre, could be taken into consideration. The groups from which beneficiaries are to be selected need to be identified in the light of the objectives of this programme, as defined from time to time.

Health and Nutrition Education

8.38. Data on the level of nutrition education and knowledge among the people in the A.N.P. areas are lacking, though there is evidence of some improvement. It is too early, however, to say whether and how far attitudes have changed; food habits and preferences are known to be slow and difficult to change. This is the most challenging aspect of the A.N.P.

Need for the inclusion of indicators on health and nutrition education in the progress reporting proforma.

8.39. Health and nutrition education can be given far greater attention in the programme implementation than it has been possible so far. Progress indicators for this sector should be introduced in the progress reporting proforma used at present.

Need for more effective communication in the matter of health and nutrition education.

8.40. The number of suitable films available in local languages is far from adequate for carrying the message of the programme to each villager. There is need for allocating more funds for making a good number of films in regional languages and colour photographs depicting the typical nutrition deficiencies in the areas and the corrective balanced diet.

Training

Need for a comprehensive syllabus for practical and job-oriented training.

8.41. In Andhra Pradesh, no syllabus has yet been prescribed for the training programme. To ensure uniformity in scope and content, first, detailed syllabus should be worked out for each category of training. The syllabus should be prepared with the help of the concerned departments and periodically examined and revised in the light of practical field experience. Secondly, greater stress should be given on job-orientation and the practical aspects of training; more field trips and field studies could be arranged with a view to imparting a practical bias.

Selection of trainees needs to be carefully done both to improve programme implementation and to reduce wastage in training

8.24. Right type of men should be selected for training. Bad selection has adversely affected the programme implementation, and has also resulted in wastage of the efforts put in training. In Andhra, persons trained for poultry keeping did not undertake poultry farming. Training given to non-fishermen as in U.P. or even to fishermen as in Andhra, did not directly benefit the programme. The training given to representatives of Mahila Mandals and Gram Laxmis in Andhra was not effectively utilized for the supplementary feeding programme. Selection of trainees needs to be done more carefully if wastage is to be avoided. Another cause of wastage has been the frequent transfer of the trained staff.

Reserve staff for training

8.43. In implementing the training programme, the difficulty reported most often relates to the non-availability of personnel to fill the vacancy for the period of training. This happens because there is no provision for reserve field staff to be put in the resulting vacancies.

Built-in assessment of the training programme

8.44. Except for some attempt in U.P., no proper system has been evolved for evaluating the effectiveness of the training programme by assessing the reactions of the trainees and trainers. Such assessment could be undertaken in other States also and built into the training programme.

8.45. In the main chapters as well as in this summary, an attempt has been made to study the problems faced and tackled in the implementation of the Applied Nutrition Programme. The long range goals of the programme justify such a problem-oriented assessment at this stage, specially since a large extension of the programme is under contemplation. It is for this reason that a number of issues have been raised and some solutions also suggested. While drawing attention to these, it needs also to be pointed out that those problems do not reflect either the nature or the magnitude of the work done so far. The A.N.P. is now a running programme in the States of India and is cutting out a path for itself on untrodden ground. The programme needs further time to develop; and it is too early to attempt a final evaluation.

APPENDIX TABLES

TABLE—A

Statement showing the list of equipment released to the four States

Equipment	Andhra	Madras	Orissa	U.P.
1	2	3	4	5
1. Vehicles	4	..	4	11
2. Bicycle	50	..	42	..
3. Water Pump . . . . .	..	..	20	..
4. Soil and water analysis kits	13	9	2	3
5. Oxygen cylinders	50	84	..	..
6. Nylon twine (lbs.)	7,600	5,000	..	..
7. Nylon nets :				
Drag (i) Drag nets . . . . .	..	171	720	32
(ii) Cast nets . . . . .	..	..	..	..
(iii) Gill nets . . . . .	..	562	..	60
8. Induced breeding equipment	1	1	..	1
9. Air Conditioner . . . . .	..	..	2	..
10. Portable Ice Plant	1	..	1	1
11. Velon Net (Yds.)	600	200	200	200
12. Out-Board Motor . . . . .	..	..	..	1
13. Marine Diesel . . . . .	..	..	..	..
14. Field Test Kits	200	..	..	..
15. Total value (in Dollars)	47,594.40	17,963.89	60,230.58	56,362.87

TABLE—B

Statement showing amount of UNICEF assistance admissible to each Mahila Mandal and Yuvak Mandal for developing economic and other activities in A.N.P. Blocks and conditions of eligibility therefor.

A. Mahila Mandals	<p><i>General Condition :</i> For receiving the grant, it will be a condition that each Mahila Mandal has or is provided by the panchayat or some one else in the village, with a suitable room where the Mahila Mandal could meet from time to time and store various articles of equipment provided under the scheme.</p>
-----------------------------	---

Equipment	Amount admissible to meet the cost	Conditions
	Rs.	
One Sewing Machine per Mahila Mandal.	190.00	The Mandal should have some facilities of help from a woman worker who can handle the machine and train the Mahila Mandal members to do so. Where a Mahila Mandal has already got a machine the grant will be admissible to other Mandals.
Handlooms of two kinds	50.00	There should be some one in the village who can handle the looms and teach the members weaving. The need for the finished articles to be used by the members, or marketed should be kept in view.
Soap-making kits, cold method	50.00	The programmes should be worked out in consultation with the Industries Department, particularly with reference to the availability of raw material.
Simple hand-operated food preservation equipment, not for canning purposes.	80.00	The availability of raw material should be taken into account before starting the programme.
Petromax light and Durri (carpet) where these are not available in the Mandal.	130.00	As under the general condition above. Where the Mandal has these articles already, the grant will be admissible to other Mandals.
Equipment for cooking and distributing food.	100.00	This part of the grant would be available where milk feeding or programme of balanced diet is introduced.
Children's recreation equipment	100.00	This part of the grant would be available when a Balwadi has been attached to the Mahila Mandals.
Total	700.00	
B. Yuvak Mandals		<i>General Condition</i> . The Yuvak Mandal should have a common meeting place, either in the school building or in the Panchayat Ghar or elsewhere. It should also have adequate facilities for storage of the equipment.
Towards construction of poultry house.	250.00	The Yuvak Mandal should adopt a economic programme of poultry and secure the necessary funds for the purpose and feeding of chicks.
or		
Equipment including net for fishery programme.	250.00	The Yuvak Mandal should have been allotted a half to one acre pond by the panchayat for developing pisciculture.
Equipment for vegetable and fruit cultivation including implements, seeds, fertilisers, etc.	150.00	The Yuvak Mandal should develop group project for vegetable and fruit cultivation on common land made available to it.
Petromax lamps and Durri (carpet) (where these are not available in the Mandals).	100.00	As under general condition.
Total	500.00	

TABLE—C

Statement showing the staffing pattern of the envisaged functions of the Nutrition Divisions in the four States.

Name of State	Staffing pattern	Functions of the Nutrition Division
1	2	3
Andhra Pradesh	1. Asstt. Director of Public Health (Nutrition) (MBBS., D.P.H.)	1. Diet and Nutrition surveys in rural areas. 1
	2. Regional Nutrition Health Officers	2. Nutrition Health surveys of Primary School children. 4
	3. Asstt. Biochemist	3. Ameliorative measures. 1
	4. Laboratory Asstts.	4. State-Central Nutrition Laboratory service. 3
	5. Laboratory Attendants	5. Nutrition Health Education through extension methods. 2
	6. Health Inspectors	6. Nutrition Health service under Expanded Nutrition Programme. 10
	7. Research Chemist	7. Legislative Health service. 1
	8. Chemical Assistant	1
	9. Superintendent-cum-Statistical Clerk	1
	10. Extension and Nutrition Officer	1
	11. Upper Division Clerks	2
	12. Lower Division Clerks	4
	13. Typists	2
	14. Drivers	5
	15. Peons	10
	16. Social Worker-cum-Clerk	1
	17. Cook-cum-Cleaners	5
Madras	1. Asstt. Director of Public Health (Nutrition) (MBBS., BSc.)	1. Field Investigation or dietary patterns and nutritional condition on a regional and occupational basis at different levels in urban and semi-urban areas. 1
	2. Nutrition Officer	2. Studies of the diets of institutions, with a view to detect losses of nutrients by unscientific cooking process. 1

1	2	3
	3. Nutrition Health Inspectors	4
	4. Chemical Assistant	1
	5. Laboratory Technician	1
	6. Laboratory Assistants	3
	7. Laboratory Attendants	2
	8. Statistical Asstt.	1
	9. Van Drivers	2
	10. Cook-cum-Cleaners	2
	11. Lascar	1
	12. Peons	5
Orissa	1. State Nutrition Officer	1
	2. Nutrition Medical Officers	3
	3. Lady Nutritionist	1
	4. Graduated Lab. Asstt.	1
	5. Computer	1
	6. Sanitary Inspectors	3
	7. Drivers	3
	8. Head Clerk	1
	9. Junior Clerk	1
	10. Peons	5
	11. Sweepers	3
Uttar Pradesh	<i>Staff for Provincial Hygiene Institute, U.P., Lucknow.</i>	
	1. Nutrition Survey Officer	1
	2. Nutrition Chemists	2
	3. Laboratory Assistants	2
	3. Concurrent nutrition surveys of sample groups for assessment of clinical manifestations of malnutrition and under-nutrition.	
	4. Institution of ameliorative measures as may be required by distribution of diet supplements.	
	5. Educative campaigns for correction and fortification of cereal diets with cheap millets, green leafy vegetables and other protective food.	
	6. In service training in nutrition of Health Workers (Health Visitors and Health Inspectors etc.) voluntary health service.	
	7. Analysis of foodstuffs and food.	
	8. UNICEF skim milk feeding programme.	
	9. School lunch programme.	
	Not available.	
	Not available.	

1	2	3
4. Office Assistants	. . .	3
5. Stenographer	. . .	1
6. Class IV servants	. . .	4
<i>Staff for Expanded Nutrition Programme.</i>		
1. Medical Officer in charge Expanded Nutrition Programme.	1
2. Lady Social Workers	. . .	2
3. Office Strength	. . .	1
4. Drivers	2
5. Class IV servants	. . .	3
<i>Staff for Applied Nutrition Programme.</i>		
1. Medical Officers	. . .	2
2. Dietician	1
3. Class IV servants	. . .	2

List of P.E.O. Publications

- 1.* Group Dynamics in a North Indian Village (1954).
- 2.* Evaluation Report on First Years' Working of Community Projects (May, 1956).
- 3.* Community Projects—First Reactions (August, 1954).
4. Training of Village Leaders in Bhopal (September, 1954).
5. Cotton Extension in P.E.P.S.U.—A case study (1955).
- 6.* Evaluation Report on Second Years' Working of Community Projects (Vols. I & II) (April 1955).
7. Evaluation Report on Second Years' Working of Community Projects (Summary (April, 1955).
- 8.* Training of Village Artisans in Bihar (May, 1955).
9. Leadership and Groups in a South Indian Village (June, 1955).
10. Evaluation Report on Working of Community Projects and N.E.S. Blocks (April, 1956).
11. Evaluation Report on Working of Community Projects and N.E.S. Blocks (April, 1956—Summary).
- 12.* Bench Mark Survey Report—Batala (Punjab) (February, 1956).
- 13.* Bench Mark Survey Report—Bhadrak (Orissa) (1956).
- 14.* Three Years of Community Projects (August, 1956).
15. Study of Village Artisans (August, 1956).
- 16.* Bench Mark Survey Report—Kolhapur (Bombay) (July, 1956).
- 17.* Bench Mark Survey Report—Morsi (Madhya Pradesh) (Nov., 1956).
- 18.* Studies in Cooperative Farming (December, 1957).
19. Fourth Evaluation Report on Working of Community Projects and N.E.S. Blocks—Vol. I: (includes studies on, 1. Achievements and Problems of the Community Development Programme, 2. Some Aspects of the Community Development Programme) (April, 1957).
- 20.* Fourth Evaluation Report on Working of Community Projects and N.E.S. Blocks—Vol. II: includes studies on, 1. Some Aspects of Social change, 2. Enquiry into coverage by Project Programme (May, 1957).
21. Bench Mark Survey Reports—Malavalli (Mysore) and Chalakudy (Kerala) (July, 1957).
22. Bench Mark Survey Reports—Banswada (Andhra), Samalkot (Andhra), and Erode (Madras) Blocks (July, 1957).
- 23.* Bench Mark Survey Reports—Pusa (Bihar), Mohd. Bazar (W. Bengal) and Arunachal (Assam) Blocks (July, 1957).
- 24.* Bench Mark Survey Reports—Pounta (Himachal Pradesh), Bhadson (Punjab) and Bhathat (Uttar Pradesh), Blocks (Oct. 1957).

*Out of Stock.

25. Bench Mark Survey Reports—Manavadar (Bombay) Nowgong (Madhya Pradesh) and Rajpur (Madhya Pradesh) Blocks (October 1957).
26. Fifth Evaluation Report on Working of Community Development and N.E.S. Blocks: includes studies on 1. Current Evaluation study, 2. Acceptance of Practices, 3. Study of Panchayats, 4. Block Records (May, 1958).
27. Fifth Evaluation Report on Working of Community Development and N.E.S. Blocks—Summary and Conclusions (May, 1958).
28. A Study of Panchayats (May, 1958).
29. Evaluation Report on the Working of the Welfare Extension Projects of the Central Social Welfare Board (April, 1959).
30. Evaluation Report on the Working of the Large and Small Sized Cooperative Societies (April, 1959).
31. The Sixth Evaluation Report on Working of Community Development and N.E.S. Blocks: includes studies on 1. Planning Process, 2. Cottage Industries, 3. Social Education, 4. Study of Co-operatives—Large and Small (June, 1959).
32. The Seventh Evaluation Report on C.D. & Some Allied Fields (1960): includes studies on 1. Current Evaluation Study of 18 selected blocks, 2. Evaluation of the 1958-59 Rabi Crop Campaign in selected areas in Punjab, Rajasthan and Uttar Pradesh, 3. Case Studies—Panchayats and Co-operatives, 4. Some Aspects of Rural Unemployment (1960).
33. Evaluation of 1958-59 Rabi Crop Campaign in Punjab, Rajasthan and Uttar Pradesh (1960).
34. Some Successful Panchayats—Case Studies (1960).
35. Some Successful Cooperatives—Case Studies (1960).
36. A Study of the Lok Karya Kshetras of the Bharat Sevak Samaj (1960).
37. Summary of Evaluation Studies (1960-61) (1961).
38. Evaluation of the Gram Sahayak Programme (1961).
39. Study of the Multiplication and Distribution Programme for Improved Seed (1961).
40. Study of the Problems of Minor Irrigation (1961).
41. Soil Conservation Programme for Agricultural Land (Under print) (1962).
42. Case Studies of the Role of Bullock Carts and Trucks in Rural Transport (1963).
43. Problems of extension of Primary Education in rural areas (1964).
44. Report on current Evaluation of the Applied Nutrition Programme, 1964-65 (May, 1965).