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Production and use of edible protein 1

President: Mr. Manuel PÉREZ GUERRERO (Venezuela).

AGENDA ITEM 4

Production and use of edible protein (E/4592 and Add.1, Add.2, Add.3 and Corr.1, Add.4, E/L.1239, E/L.1240)

1. The PRESIDENT invited Mr. Rankin (Observer for Canada) to introduce a working paper prepared by Canada (E/L.1239).

2. Mr. RANKIN (Observer for Canada) said that his delegation's chief concern was to help the developing countries to avert the protein crisis. It therefore stressed the need to translate the proposals of the Advisory Committee on the Application of Science and Technology to Development into effective and co-ordinated action. Now that the problem had been well-defined, it had to be solved, and each country should consider what it could do, individually and through the United Nations system.

3. The chief responsibility naturally lay with the developing countries which were short of proteins. They should be helped to prevent the situation from reaching the crisis stage. To that end, the developed countries should use their advanced scientific and technological knowledge to study ways and means of producing supplementary sources of proteins. They should also support projects designed to increase the production and consumption of edible protein and given a high priority by the recipient countries.

4. The organizations of the United Nations family likewise had important responsibilities and were aware of them, as was shown by the establishment of the FAO/WHO/UNICEF Protein Advisory Group and the adoption by FAO of a plan of priorities. Those responsibilities, however were increasing. There were the problems of making present knowledge available to all who needed it, of supplying sound advice to all who asked for it, of ensuring adequate co-ordination and co-operation to avoid duplication of effort, and of providing necessary financial and technical assistance to developing countries with protein shortages. The studies carried out had defined the problem; co-ordinated action was now required to solve it.

5. The world community should call upon the experience of FAO, WHO and UNICEF, as the ad hoc Panel of Experts and the Advisory Committee on the Application of Science and Technology to Development had recognized, when they had suggested that the United Nations should turn to the Protein Advisory Group and, by extending its terms of reference and membership, give it co-ordinating and information responsibilities as well.

6. A number of countries felt that a new body should be set up. Admittedly, forceful action was needed to bring the attention of the world community to the serious problem, but any new arrangement, if it was to be effective, should be carefully worked out by Governments in consultation with United Nations agencies. The ad hoc Panel of Experts and the Advisory Committee on the Application of Science and Technology to Development did not feel it necessary to set up a new body. In any event, that question should be carefully but quickly examined. His Government hoped that effective co-ordination would be established within the United Nations. He hoped that the Council's consideration of the working paper submitted would result in more effective action.

7. Mr. ANDRÉ (Food and Agriculture Organization of the United Nations) observed that the Protein Advisory Group and the Functional Group on Protein of the Advisory Committee on the Application of Science and Technology to Development had carefully studied the report of the Secretary-General (E/4592 and Add.1, Add.2, Add.3 and Corr.1, Add.4). The report, based on the replies of various Governments to a questionnaire from the Secretary-General, was incomplete, as only sixty countries had been able to reply so far.

8. FAO agreed with the Protein Advisory Group that conventional sources of edible protein should be given priority and that in the not too distant future unconventional protein sources would be of considerable importance. It also concurred with the Group in its adoption of the targets and programme priorities (see E/4592/Add.1) proposed by the Advisory Committee on the Application of Science and Technology to Development. Naturally co-ordination and policy-making were but a preliminary stage in the development of action programmes, which were the real goal.

9. The five priorities set by the Director-General of FAO - use of high-yielding varieties of cereals, action to close the protein gap, the war against food waste, the mobilization of human resources in rural areas, and the encouragement of foreign exchange conservation and export earnings were also designed to help solve the protein problem. While it was known what action was required, it was necessary to utilize theoretical data and to implement co-ordinated programmes at the national and international levels.

10. Valuable experience in co-ordination had already been gained by WHO, UNICEF and FAO. Meetings of the secretariats of the three organizations and of the Protein Advisory Group - which those organizations had established and whose members they selected

jointly - were examples of such operational co-ordination. To ensure that the system possessed the necessary scope, the existing machinery should be left intact and should not be encumbered, as that would reduce its effectiveness. An enlarged FAO/WHO/UNICEF Protein Advisory Group had been in existence since 1968. That Group was in a position to formulate and propose a comprehensive policy applicable at the international and national levels. The Group now had twelve members instead of eight and additional members from disciplines which were not represented or which were inadequately represented could always be included. The attendance at the Group's meetings of representatives of several specialized agencies ensured the required dissemination of information. The Group's agendas always struck a balance between the subjects proposed by the three organizations. FAO, WHO and UNICEF were willing to consider all study requests prepared by United Nations agencies or by Governments; such studies would be entrusted to the Protein Advisory Group. The Group was fully able to help co-ordinate the activities of the three organizations. While each of those organizations should act as a catalyst, that role would prove meaningless if action programmes were not carried out at the national and regional levels. The gradual re-organization going on within FAO and the efforts to develop the existing co-ordination system took into account all aspects of the protein problem, and it should be possible to launch specific programmes to solve the problem in the near future.

11. Dr. COIGNEY (World Health Organization) drew the Council's attention to the letter from the Director-General of WHO, circulated as an addendum to the report of the Secretary-General on the protein problem (E/4592/Add.3 and Corr.1). WHO endorsed the activities in the protein field undertaken by the Advisory Committee on the Application of Science and Technology to Development, the Economic and Social Council and the General Assembly.

12. The Protein Advisory Group had been established in 1955 by WHO, which had later invited FAO and UNICEF to participate in its work. Its terms of reference had been expanded to enable it to advise United Nations bodies on co-ordinated action. Its membership had recently been enlarged to include all essential disciplines. The extension of its terms of reference enabled it to advise organizations on programmes under way, new areas for action, improved project evaluation procedures and feasibility studies. It could also formulate guidelines on programmes to be undertaken by United Nations bodies. The Protein Advisory Group was encouraged by the interest which the United Nations, UNESCO, UNIDO, IAEA and UNDP had shown in its activities. It had decided to invite organizations wishing to participate in its work to send representatives to its meetings whenever topics of particular interest to them were being discussed. That arrangement enabled the Group to keep itself informed about the programmes and interests of other organizations, and it also enabled the organizations to benefit from the advice and expertise of the Group. Questions relating to the participation of other organizations in the work of the Protein Advisory Group, and the co-ordination of their efforts in the protein field, should be considered within the framework of the Administrative Committee on Co-ordination.

13. WHO felt that increased importance should be attached to the protein problem. The expanded terms of reference of the Protein Advisory Group were intended to meet that need. A suitable methodology, interdependent activities and co-ordinating machinery to ensure rapid plan implementation appeared necessary. The effects of protein malnutrition were most serious when the victim had an infectious disease. The most effective utilization of protein sources and protein foods should be accompanied by improved environmental sanitation and improved measures to control infectious diseases.

14. Centres for the classification, storage and retrieval of information on the protein problem already existed in the United States and the Netherlands, and those of WHO and FAO performed similar services. The Protein Advisory Group was responsible for ensuring the dissemination of information directly related to that problem. It would be desirable to consider what measures could intensify those activities. Particular attention should be focused on the special needs of vulnerable groups such as infants, pregnant or nursing women, and the like. Efforts should also be made to encourage the establishment of regional study and research centres in the field of nutrition and food. WHO had already supported such centres. All the interested United Nations organizations should act as catalysts in encouraging Governments to consolidate their activities and resources in the search for a solution to the protein problem.

15. Mr. CREMIN (Ireland) said that the protein problem, which existed mainly and in its most acute form, in the developing countries, had its most serious effects on young children. As was pointed out in the report of the Secretary-General, about one quarter of the population of the developing world was below the age of eight. Moreover, according to the preface of the report of the Advisory Committee on the Application of Science and Technology to Development,1/ there were over 300 million children who, for lack of protein and calories, were suffering grossly retarded physical growth and development, and, for many of them, mental development, learning and behaviour might be impaired as well. The report also stated that protein and calorie deficiencies directly affected the health and economic productivity of adult populations, and that such nutritional deficits, which damaged present and future generations, were built-in handicaps which had to be corrected.

16. The proposals of the Advisory Committee were, generally speaking, acceptable to his delegation, which approved of the fact that four of them had been given priority under Economic and Social Council resolution 1257 (XLIII). They were the proposals to promote the production and use of conventional sources of protein within developing countries; to increase the direct use of oil-seed production and promote the use of fish protein concentrates; to utilize measures for the avoidance of wastage of food; and to build up

1/ Feeding the Expanding World Population: International Action to Avert the Impending Protein Crisis (United Nations publication, Sales No.: E.68.XIII.2).

relevant regional and national research, development and training institutions in developing countries.

17. As was emphasized in the report of the Secretary-General, there was no single or simple solution to the protein problem. His delegation felt, however, that efforts should now be concentrated on two different aspects.

18. First, it was necessary to increase the production of protein foods—which meant, at the outset, protein foods from conventional sources—and to make them available in areas of greatest need. It was therefore encouraging to hear that the President of the World Bank had announced, in his address to the Board of Governors of IBRD on 30 September 1968, that the volume of loans for agriculture in the developing world would quadruple in the next five years. Nevertheless, in view of the serious current shortage of protein food, the developing countries would have to rely heavily on imports for some time to come. But imports had to be paid for, and it was vital that the international monetary system, which suffered from serious inadequacies, should be strengthened as part of a global development strategy, in which a plan for solving the protein problem should certainly have an important role.

19. Secondly, efforts should be made to influence public opinion in the countries for which the consumption of protein food was most important. That process education should, of course, be undertaken principally by Governments and competent national bodies, but the Economic and Social Council and the United Nations as a whole might be able to take measures to accelerate it.

20. The immediate problem was to promote greater production, availability and consumption of protein foods. In his report, the Secretary-General drew attention to the need for strong political support to ensure an integration of managerial, economic, and scientific considerations and suggested that the time had come for the United Nations to play a catalytic role. It would perhaps be premature for the Council to propose specific measures in that regard. The Protein Advisory Group considered it desirable that a more complete report should be prepared in two years time, when more replies from Governments had been sent in and analysed. Nevertheless, his delegation believed that everything possible should be done to ease the situation in the meantime. In that connexion, the Secretary-General might consider taking certain courses of action, since he was well placed to supervise and co-ordinate the activities not only of the United Nations proper, but also of its related institutions. His delegation therefore thought that the Council should invite the Secretary-General to take such measures as he might consider useful to find a rapid solution to the very grave problem under discussion.

21. Mr. GOLDSCHMIDT (United States of America) said that the progress on the protein problem illustrated once again the effectiveness of the United Nations system as a means of communication, especially in the economic and social fields. The report of the Advisory Committee on the Application of Science and Technology to Development, published less than two years earlier, had identified the protein problem as one of the major stumbling blocks to economic and social development. The report of the Secretary-General and the number of replies received to the questionnaire were evidence of the interest and activity in the crucial protein field, which the United Nations had succeeded in stimulating in both developed and developing countries. Thus, whatever its limitations of power, the United Nations, by drawing attention of Member States and the specialized agencies to the most pressing problems of the day, had had a considerable influence in the economic and social field, and, as a catalyst, it had contributed to the achievement of the purposes set forth in article 55 of the Charter.

22. The United Nations influence had been effective in the population field, where it had galvanized Governments into trying to solve the other side of the food-population problem. The same thing appied to proteins. The report of the Secretary-General gave a clear statement of the disastrous consequences that would ensue for young children in particular if immediate action was not taken to remedy protein deficiencies. There was no simple, universal solution as the problem was not the exclusive concern of any single sector, region or agency. It was necessary not only to mobilize a considerable volume of scientific and technical expertise, but also to find ways and means of making slight variations in daily diets acceptable to individuals.

23. The United Nations had not only stimulated Governments to act in that important field, but its related organizations, particularly UNICEF, FAO and WHO, had made significant contributions in identifying and easing the problem. Other United Nations bodies such as UNIDO, UNCTAD, UNESCO and UNDP, as well as the Department of Economic and Social Affairs should and could follow their example and help to solve the problem.

24. His delegation welcomed the enlargement of the Protein Advisory Group and hoped that its expertise would be made available to all United Nations bodies involved in the protein problem.

25. For its part, the United States was perfectly well aware of the problem and was making great efforts in the scientific, governmental, industrial and educational field. The measures taken by the United States Government to relieve hunger and malnutrition in the developing world were evidence of its concern for the quantity and quality of world food supplies. Its efforts were being concentrated on improving the protein quality of existing cereals and on research into new protein foods. At the same time, the United States was increasing the nutritional value of its food aid, encouraging university research, collaborating with private industry to produce and market enriched foods, and stimulating the developing countries to increase production and use of such foods. In 1967, for instance, the United States had sold to the developing countries on concessional terms approximately $1,000 million of food commodities and donated approximately 2.4 million tons of food, worth $548 million. It had also provided finance recently for about eighteen research projects on edible proteins. During 1968, the Bureau of Commercial Fisheries would spend more than $1.1 million to increase production of fish protein concentrates. The Government had also

financed educational activities including many international meetings and seminars on the subject of new protein foods and was participating in the financial support of several regional and national centres for the promotion of agricultural and protein research in several developing countries. Finally, the Nutrition Program of the Public Health Service had conducted nutritional surveys in thirty-three countries.

26. In addition to the Federal Government's efforts, private institutions were engaged in similar activities. Hundreds of American universities, for example, were successfully conducting research with a view to increasing and improving sources of protein, and in 1967 agricultural technical assistance to a value of $25 million had been furnished by forty such universities. Many other institutions and foundations, notably the Ford and Rockefeller Foundations, were actively concerned with the problem. The International Institute of Tropical Agriculture at Ibadan, Nigeria, was the newest of four research institutes established under the auspices of those two foundations. One of the primary objectives of those institutes was to convert low-quality foodstuffs into high-quality animal protein.

27. The Secretary-General's report recognized the need for mobilizing all available resources and institutions. American private industry played an important role in the development and marketing of new protein foods both in the United States itself and in developing countries. The introduction of new sources of protein into the diet was essentially a problem of marketing and publicity, for the success of a product depended first and foremost on consumer acceptance.

28. It was also stated in the Secretary-General's report that it was important to mobilize industry in developed and developing countries alike to direct an increasing volume of their activities to the solution of the protein problem in the developing countries, particularly those engaged in the agro-industrial sector and those working on applied research. That was already being done in the United States, where, for example, the Agency for International Development provided grants to private companies to enable them to study the markets for protein-enriched products in areas of the world where diets were deficient. Those efforts were undertaken in collaboration with the agricultural, industrial and marketing sectors of the developing countries themselves.

29. He showed the Council a few samples of protein products recently produced and marketed in developing countries as a result of United States initiative. Those products met the conditions mentioned in the Secretary-General's report. They were intended for the most vulnerable group (young children and particularly the weaning child) and provided all their nutritional requirements. They were produced on a large scale and at low cost. They could be distributed effectively (through the normal commercial channels). They were produced in local industrial enterprises and from raw materials existing in the countries in which they were marketed; thus only the techniques for production had to be imported. Finally, the foods thus obtained were as similar as possible in taste, form and consistency to the traditional foods of the consuming countries.

30. The United States had obtained excellent results with non-conventional sources of protein, notably fish protein concentrates, and in order to convince Council members that the problem of consumer acceptance seemed to have been solved in that respect, he had some protein biscuits distributed, which were made from fish flour and had an agreeable flavour.

31. In conclusion, he wished to make some suggestions for the future. First, the protein problem must be kept high among the priorities of planners and decision-makers at government level. As was stated in the report, each Government should adopt an integrated approach to the problem, the results of which would depend on the particular circumstances of each country (resources, climate, etc.). The United Nations agencies should also continue to give high priority to the problem in order to interest all Governments. The enlarged Protein Advisory Group and the Advisory Committee on the Application of Science and Technology to Development could usefully stimulate efforts in that sector. The United States delegation considered that the protein problem could only be solved by ensuring a better functioning of the existing United Nations machinery and that it would be a mistake to seek to create a new organ whose work might duplicate what was already being done by existing bodies.

32. Finally, the Economic and Social Council should continue its interest in the protein problem and ask all institutions to report to it on their activities in that field. The United Nations had so far shown itself to be very effective in the matter, as the Secretary-General's excellent report demonstrated, and the momentum thus achieved should be maintained.

33. Mr. DUBEY (India) said that the activities undertaken by the United Nations agencies during the past two or three years had made the world aware of the gravity of the protein problem. In that, the report of the Advisory Committee on the Application of Science and Technology to Development[2/] marked a turning point. The Administrative Committee on Co-ordination had stressed that the momentum gained must be maintained. In his report, the Secretary-General had warned that by the time the second United Nations Development Decade was over the problem should have been taken significantly in hand or the outlook would be grave. The Secretary-General had identified the critical sectors which called for an intensification of efforts on an urgent basis. The problems relating to the protein crisis did not lend themselves to solution by conventional methods. They also did not relate to mere project implementation or provision of advisory services by the specialized agencies, although the importance of the activities undertaken by those agencies should be fully recognized. What was required was a multidisciplinary approach involving a number of considerations and calling for the active participation of all the organizations within the United Nations system.

34. The problems were many, and thought must be given to the question of how to solve them. That was what the Indian delegation had attempted to do in the draft resolution which it sponsored (E/L.1240). His

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[2/] Ibid.

delegation was not wedded to any particular phrase in that draft. The draft resolution intended to request the Secretary-General to continue to provide leadership in the solution of the protein problem, to give a precise mandate to him for that purpose, to determine the framework within which he should carry out further activities in that field and to indicate the sources of financing and technical assistance that would enable him to carry out his task. It sought merely to indicate the necessary means of moving forward. His delegation would be prepared to modify the draft resolution along any lines that would ensure the fulfilment of those purposes.

35. Before submitting the draft resolution, the Indian delegation had attempted to reconcile divergent points of view with the co-operation of other delegations. Unfortunately, for lack of time, it had not succeeded. It consequently considered that the Council would be well advised to take note of the various views on the question and to make them known to the General Assembly, which would examine them in greater depth and which, it must be hoped, could decide on concerted action for solving the protein problem.

36. Mr. de SEYNES (Under-Secretary-General for Economic and Social Affairs) recalled first that the Secretary-General had made his views known on the protein problem on many occasions and that he had considered it important enough to consider it at length in the introduction to his annual report to the General Assembly.[3/]

37. It was true that there was no single, definitive solution to the protein problem, It was also true that numerous activities had been carried out in that respect which had probably been somewhat underestimated in the first report of the Advisory Committee on the Application of Science and Technology to Development.[4/] It had consequently been considered necessary for the Committee to draw up a second report (E/4592/Add.2), which, though still incomplete in some respects, permitted a better grasp of the problem. It was nevertheless true that the question of proteins constituted a crisis, which existed because mankind was faced with a problem with humanitarian aspects, and some of the solutions to that problem were known to be within the reach of the international community. It would therefore be somewhat scandalous not to take steps to resolve it.

38. From the technical standpoint, much had been done towards identifying the problem: data had been gathered; several solutions had been found; and the direction further research should take had been determined. The need now was to mobilize the political will of States in support of the solutions to be applied. Of course, that was not the only problem which called for the mobilization of political will. The Council and the Assembly were trying to mobilize the political will to deal with many questions, though it would be presumptuous to say that any great progress had been made in that respect.

39. The protein problem was also a problem of management. There was a need to intensify the efforts being made in very diverse fields, and to co-ordinate them within a programme developed through systems analysis techniques. A number of programmed and synchronized activities should be mapped out on the understanding that certain decisions would have to be made as circumstances dictated. In that connexion, it was questionable whether those objectives could be attained without some changes in the existing machinery. There was no doubt, however, that the Protein Advisory Group, in which FAO, WHO and UNICEF took part, was a most important part of the necessary machinery. There was also the problem of resources, i.e. the amount available and how they were to be allocated to various needs; and it was not certain that that problem was being solved by the existing machinery. In that regard, it was pertinent to recall that on other and similar occasions additional machinery had been used. That had been done, for example, in the case of the Secretary-General's appeal for funds to carry out a programme of action in the field of population.

40. In his opinion, the protein problem was a real test for the United Nations on the eve of an era in which science and technology would increasingly impinge on it, as could be seen from the increasing concern of the international community about atomic energy, outer space, the sea-bed and computers. Those were problems which called for action by the United Nations not only because they had to do with relations of interdependence between States but also because they affected power relationships, regarding which the United Nations could not indefinitely remain unconcerned.

41. Mr. VARCHAVER (United Nations Educational, Scientific and Cultural Organization) recalled that the report of the Advisory Committee on the Application of Science and Technology to Development, which had been submitted to the Council at its forty-third session[5/] had recommended that UNESCO stimulate the basic research needed to promote progress in protein production and consumption.

42. Since 1954 basic research in biological cells had been part of the programme of UNESCO which, several years later, had set up the International Cell Research Organization. Since that time, the UNESCO programme of cell and molecular research had been carried out in close co-operation with that organization. In the training courses jointly organized by the two organizations, young scientists from developed as well as developing countries were taught the new findings and techniques in fundamental cell research. For the past two years emphasis had been laid particularly on fundamental studies of new sources of protein and single-cell proteins. Similarly, to encourage the exchange of knowledge and to co-ordinate research in the field of applied microbiology, UNESCO organized annual conferences which particularly stressed the problems related to the production of single-cell protein.

43. As regards the future, in response to Economic and Social Council resolution 1257 (XLIII) and General Assembly resolution 2319 (XXII), UNESCO's activities in those areas would be substantially increased. The

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3/ See Official Records of the General Assembly, Twenty-third Session, Supplement No. 1A, para. 71.

4/ See footnote 1.

5/ See footnote 1.

budget for 1969-1970 provided for an increase of approximately 85 per cent in appropriations to reinforce activities in research on single-cell proteins and protein synthesis. In addition, the number of training courses would be increased to ten; a symposium on single-cell proteins for fodder and food would be organized; and an international scientific symposium on molecular biology and protein production processes had been proposed.

44. At its seventy-eighth session, the Executive Board of UNESCO had particularly stressed the importance of integrating the activities of United Nations organizations in that field and had been of the opinion that UNESCO should be a member of the Protein Advisory Group. It had invited the Director-General to take the necessary measures in order to attain such membership status. The consultations which were taking place with FAO, WHO and UNICEF should result in strengthening the inter-agency efforts to solve the protein problem and should enhance the multidisciplinary approach of the Protein Advisory Group.

45. In March 1968, UNESCO had organized the Symposium on Brain Research and Human Behaviour. One of the round tables at that Symposium had discussed the influence of nutrition on brain functions and it had been agreed that nutrition had a direct influence on brain development, particularly in the earlier periods. Malnutrition during those periods resulted in retardation of growth and the loss of the mental potential of the child. The Symposium would be followed up by a number of basic research projects which would study the relation between malnutrition and brain development.

46. UNESCO was making every effort to respond, in the area of its competence, to the recommendations of the Advisory Committee and to the resolutions of the Economic and Social Council and the General Assembly.

47. It had been said that the cerebral system was a system of organization. So was the problem of development, which—in the opinion of the Director-General of UNESCO—was really a problem of mankind's organization and was not peculiar to certain regions, to certain societies, or indeed to certain races. It was a problem of bad over-all organization. In fulfilling its responsibility to man's mental behaviour as a whole, UNESCO was endeavouring to ensure that the children and youth on whom the development of the world depended were able to exert their capabilities to the full.

The meeting rose at 1.5 p.m.

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