

conference

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C 91/10
October 1991

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS ROME

Twenty-sixth Session

Rome, 9-28 November 1991

REPORT OF THE DIRECTOR-GENERAL ON THE IMPLEMENTATION OF RESOLUTION 1/89 "PROVISION OF TECHNICAL ASSISTANCE TO THE PALESTINIAN PEOPLE"

INTRODUCTION

1. At its Twenty-fifth Session in November 1989, the Conference¹ requested the Director-General "to send a mission to study and evaluate the situation of the agricultural sector in the occupied Palestinian territory, taking into consideration the conditions of the farmers under the existing occupation policies and practices, and to prepare a report comprising possible technical interventions to be executed by FAO;...". The Conference also requested the Director-General to organize a symposium on the Palestinian agricultural sector and to include the occupied Palestinian territory in future FAO programmes and activities. The Conference further requested the Director-General to report to the Council at its next session and to the Conference at its Twenty-sixth Session on the progress achieved in the implementation of the Resolution.

MISSION TO THE OCCUPIED PALESTINIAN TERRITORY

2. In his report to the Ninety-eighth Session of the Council², the Director-General reported on his correspondence with the Permanent Representative of the Government of Israel regarding the fielding of a mission. Copies of the correspondence are attached as Appendix A to this document. The Council noted with satisfaction the progress achieved and expressed its appreciation to the Director-General for the steps which he had taken, in particular with respect to sending a mission to study and evaluate the situation of the agricultural sector in the occupied territory. It confirmed that the mission should proceed on the basis of the action taken by the Director-General.

3. Since the Council session, the Director-General has had further correspondence with the Permanent Representative of the Government of Israel regarding the fielding of the mission. On 7 June 1991, the Director-General wrote to the Permanent Representative of the Government

¹ Resolution 1/89

² CL 98/15

of Israel announcing the composition of and proposed dates for the mission. On 2 July 1991 the Permanent Representative replied confirming her Government's acceptance of the mission on the dates proposed. Copies of the correspondence are attached as Appendix B to this document.

4. The mission, which was led by the former Deputy Director-General of the Organization, Mr Declan Walton, took place as scheduled on 23 August to 6 September 1991. The report of the mission is attached as Appendix C to this document.

5. The report of the mission identifies a number of possible technical interventions by FAO, as requested by the Conference. The suggestions of the mission are summarized in paras 10-11 below.

SYMPOSIUM ON THE PALESTINIAN AGRICULTURAL SECTOR

6. At its Ninety-eighth Session, in November 1990, the Council requested that the symposium envisaged in Conference Resolution 1/89 be organized soon. It was hoped that the results of the mission would be included in the agenda of the symposium but the convening of the symposium should not be linked to the sending of the mission. The symposium could take place in Rome.

7. The Director-General wishes to report that the symposium on the Palestinian Agricultural Sector took place in Rome on 9-11 October 1991. It was attended by consultants and experts selected from the Occupied Palestinian Territories in the West Bank and Gaza in their personal technical capacity and by representatives from the UN Organizations (the UN Office of Political and General Assembly Affairs Division for Palestinian Rights; UNDP; UNCTAD; ITC; IFAD; WFP; UNRWA; ESCWA), the League of Arab States, Al-Quds Open University, and the Palestine Liberation Organization.

8. Three papers were presented:

- The Present Situation of the Agricultural Sector in the Occupied Palestinian Territories.
- Present Agricultural Policies and their Impact on Agricultural Development in the Occupied Palestinian Territories.
- Institutional Support to Agricultural Development in the Occupied Palestinian Territories.

9. A full and constructive discussion took place during the Symposium, which identified a series of measures required for agricultural development in the occupied Palestinian territory. The proceedings of the Symposium will be published in due course.

POSSIBLE TECHNICAL INTERVENTIONS BY FAO

10. In line with the request of the Conference in Resolution 1/89, operative paragraph 2, the mission's report suggests possible technical interventions by FAO. These are summarized in the final section of the report (Appendix C, paras 180-183) as shown below.

11. The mission emphasizes that this should not be considered as a closed list. In the course of even a few months circumstances can change, some problems may be resolved and others may emerge.

12. The most urgent area for action, in the mission's view, is the first proposal below, relating to citrus production in Gaza.

Crop production and protection

- study of future of citrus production in Gaza Strip;
- additional measures for coping with phylloxera epidemic in grapes, stem borer infestation of figs, and Mediterranean fruit fly in citrus;
- possible improvements in olive production and marketing;
- new crops, including tree crops (especially nuts);
- introduction of facilities for testing and certification of seeds and seedlings and possibly for tissue culture;

Livestock

- possible use of agricultural by-products as feed;
- improved network of micro-dairy plants;
- support for the brucellosis eradication campaign;

Fisheries

- possible development of aquaculture in Gaza Strip;

Markets/marketing

- strengthen efforts to improve market intelligence, grading and packaging;
- search for new niche markets, especially in floriculture, in cooperation with project of International Trade Centre;

Agro-industries

- review of development possibilities in agro-industrial fields of direct concern to FAO;

Water problems

- study of long-term water problems of West Bank and Gazan agriculture;
- additional ways of using saline water for agriculture;
- arrangements for systematic maintenance and renewal of irrigation pumps;

Land issues

- possibilities of strengthening rainfed production;
- afforestation and range management;

Institutions

- prepare overall plan for strengthening of extension function and of agricultural education and training;
- strengthening of research function to meet location-specific needs;
- training programme in organization of cooperatives;
- advisory service on farm management and investment in agriculture;
- programme and projects monitoring system;

Role of women

- prepare programme of assistance to the organizations promoting the role of women in development;

Environment

- protection against pollution from pesticides and over-use of fertilizers.

13. Specific action in any of these areas would need careful advance study, in greater depth than was possible in the course of the mission, and would of course require funding. The modalities of action could follow those adopted by existing programmes, in particular that of the UNDP.

CONCLUSIONS

14. The Conference is invited to review the information presented above, and to consider in particular the suggested approach to possible technical interventions by FAO.

LEG-DG/90/722

27 JUN 1990

Dear Mr. Hartuv,

I have the honour to refer both to Resolution No. 1/89 adopted by the FAO Conference on 29 November 1989 requesting the Director-General to send a mission to study and evaluate the situation of the agricultural sector in the occupied Palestinian territories, as well as to the constitutional mandate of the Organization to collect, analyze, interpret and disseminate information relating to nutrition, food and agriculture, as expressed in Article I.1 of the FAO Constitution. Operative paragraph 6 of the above-mentioned Resolution requests me, as Director-General, to report to the FAO Council at its next session, scheduled for 19-30 November 1990, on the progress achieved in the implementation of the Resolution.

In pursuance of the above, I would appreciate receiving the agreement of the Israeli Government to extend the necessary cooperation and facilities to the mission in order to enable it to fulfil its task, and to meet with representatives of the Israeli authorities and other parties concerned. Meanwhile I have designated Mr. Regnier, Director, Field Programme Development Division, together with Mr. Moore, my Legal Counsel, as contact officers should you wish to consult on any aspect of the mission or wish any further information or clarification.

Yours sincerely,

Edouard Saouma
Director-General

Mr. Ilan Hartuv
Minister Counsellor
Permanent Representative of
the State of Israel to FAO
Embassy of the State of Israel
Rome

AMBASCIATA D'ISRAELE

שגרירות ישראל

Rome, September 24th, 1990

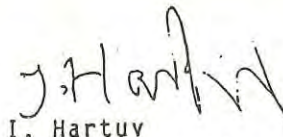
DR. E. SAOUMA
DIRECTOR General
F.A.O.
Via delle Terme di Caracalla
R O M A

Mr. Director General,

In your kind letter of 27.6.90 you have written that I may consult with Messers Moore and Regnier of your Organisation.

I have had two meetings with the distinguished officials and I am also writing to Mr. Moore (copy to Mr. Regnier) regarding matters raised in your letter.

Accept, Mr. Director General, the assurances of my highest consideration.



I. Hartuv

Permanent Representative
of Israel to the FAO

c.c.: Mr. Gerald K.F. Moore
Legal Counsel - LEG B363
FAO

Mr. A. Regnier
Direttore, Field Program
Development Division - DDF D746/7
FAO

AMBASCIATA D'ISRAELE

שגרירות ישראל

Rome, September 25th, 1990

DR. E. SAOUMA
DIRECTOR GENERAL
F.A.O.
VIA DELLE TERME DI CARACALLA
R O M A

Mr. Director General,


The Government of Israel has instructed me to write to you the following message:

The Government of Israel has always striven to cooperate fully with the F.A.O. and with you personally, having great regard to the achievements of the F.A.O. and to your leadership and always striving to be a loyal member of the organisation and to contribute to it at the best of its ability.

Therefore, the government will favorably consider any request from you to send a personal delegate or a group of experts to study the situation of food and agriculture in the territories administered by Israel.

Of course when such a visit will be organised, the delegate or group of experts will be able to meet any officials and residents who have any relevant information and will also be able to visit freely in the territories.

Accept, Mr. Director General, the assurances of my highest consideration.


I. Hartuv
Permanent Representative
of Israel to the FAO

c.c.: Mr. Gerald K.F. Moore
Legal Counsel - LEG 8363
FAO

Mr. A. Regnier
Director, Field Program
Development Division - DDF D746/7
FAO

07. VI. 1991

Dear Miss Rimon,

I refer to our previous correspondence concerning a mission to study and evaluate the situation of the agricultural sector in the occupied territories, and to your various discussions on this matter over the last months with the FAO Legal Counsel, Mr. Moore.

I should like to confirm that I have designated Mr. Declan Walton, formerly Deputy Director-General of the Organization, to lead the mission and to act as my representative in this respect. He will be accompanied by the following FAO staff members: Mr. A. Cortas, Assistant to the Assistant Director-General, Economic and Social Policy Department, and Mr. R. Branckaert, Animal Production Officer of the Animal Production and Health Division, Agriculture Department. The mission is scheduled to take place from 23 August to 6 September 1991.

I would appreciate your Government's confirmation of its acceptance of this mission.

Yours sincerely,

Edouard Saouma
Director-General

Miss Tzipora Rimon
Permanent Representative to FAO
Embassy of the State of Israel
Via Michele Mercati 12
00197 ROME



AMBASCIATA D'ISRAELE

שגרירות ישראל

Rome, July 2nd, 1991

DR. E. SAOUMA
DIRECTOR-GENERAL
F.A.O.
VIA DELLE TERME DI CARACALLA
R O M A

Mr. Director-General,

With reference to your letter of 7 June 1991, I would like to inform you that the Government of Israel has confirmed its acceptance of the mission to study and evaluate the situation of the agricultural sector in the territories administered by Israel, scheduled to take place from 23 August to 6 September 1991.

The Government of Israel will extend to the mission every assistance required for the preparation and during the visit.

Accept, Mr. Director-General, the assurances of my highest consideration.

Tzipora RIMON
Permanent Representative
of Israel to the FAO

C 91/10

APPENDIX C

THE PALESTINIAN

AGRICULTURAL

SECTOR

REPORT

OF MISSION

TO THE

OCCUPIED PALESTINIAN TERRITORY

(23 August - 6 September 1991)

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REPORT ON THE PALESTINIAN AGRICULTURAL SECTOR

INTRODUCTION

1. The present report is based on the findings of a mission sent by the Director-General to Israel and the Occupied Palestinian Territories (OPT) to examine the conditions of the Palestinian agricultural sector, and to suggest possible technical interventions by FAO.
2. The mission was carried out between 23 August and 6 September 1991 by Mr Declan J. Walton, Special Adviser to the Director-General (previously Deputy Director-General); Mr Adel Cortas, Assistant to the Assistant Director-General, Economic and Social Policy Department; and Mr René Branckaert, Livestock Production Officer, Animal Production and Health Division.
3. To prepare for the mission, advance information was sought from the widest possible range of sources. The Permanent Mission of Israel to FAO provided statistical and other material. Technical briefing on all aspects of the sector was received from the Agriculture Section of the Department of Economics and Planning of the Palestinian Liberation Organization, and publications of other organizations of the United Nations system, of universities and of non-governmental organizations were carefully studied. The mission also had access to initial drafts of the papers specially commissioned for the Symposium on the Palestinian Agricultural Sector. While this material was found useful, the mission's conclusions and recommendations are based primarily on its own observations, and on the very numerous discussions which it held on the spot.
4. While being fully aware of the complex political situation in the region, the mission has taken great care to remain within its terms of reference as defined by the FAO Constitution and decisions of the FAO Conference. The political problems of the region are certainly not within the competence of FAO. At the same time no technical analysis of the Palestinian agricultural sector can ignore the impact of the wider political context on a multitude of issues ranging from regional trade to land and water resources. In dealing with the broader context a balanced account is attempted, without glossing over the political aspects but also without focusing on political issues as such. The mission's report is thus designed to give an overview that is technical, objective and rounded.

PROGRAMME OF THE MISSION

5. The mission held numerous discussions in Israel, the West Bank and the Gaza Strip. Its work was greatly facilitated by the senior officers of the Civil Administration responsible for the territories. An initial briefing was provided by the Deputy Coordinator, briefings and field visits were arranged by the Heads of the Civil Administration in the two territories respectively, and a round-up meeting was held at the end with

the Coordinator of the Civil Administration. Discussions were held with senior officials of the Ministry of Foreign Affairs, and visits were organized to the Volcani Center for Agricultural Research, the Institute of Hydrology, the Central Bureau of Statistics, and the Ministry of Agriculture's Department of Veterinary Sciences.

6. Meetings with a wide range of Palestinian institutions and individuals active in agriculture were kindly arranged by the UNDP Office in Jerusalem. These included cooperatives, universities, associations, projects, experts and farmers, as well as national and international NGOs. Visits were made to the Departments of Agriculture (which form part of the Civil Administration) in the districts of Nablus, Jenin and Tulkarem. The mission held discussions with the Directors of the UNRWA Operations in the West Bank and Gaza. The mission's livestock expert visited a number of producers with the help of a specialist staff member of American Near East Refugee Aid (ANERA).

7. Exemplary cooperation and assistance was received from UNDP throughout the visit. The mission benefitted not only from logistical and other forms of practical aid, but more particularly from briefing and extensive discussions with the Special Representative of the UNDP Administrator and the Programme Officer responsible for the agricultural component of the UNDP Programme of Assistance to the Palestinian People.

THE ECONOMY OF THE OPT AND THE DEVELOPMENT OF AGRICULTURE

(a) Area and population

8. The West Bank has a total land area of about 580 000 hectares, much of which is covered by mountains and rocky slopes. According to Israeli Civil Administration sources, its population in 1989 was as follows:

Jewish Population	110 000
Urban Arabs	210 000
Rural Arabs	612 000
Refugees in Camps	<u>92 500</u>
Total West Bank	915 500

The total number of refugees recognized by UNRWA is far higher than the number in camps, and comes to 304 000, about a third of the population.

9. The current rate of population growth exceeds 3% per annum.

10. The Gaza Strip is far smaller, and more densely populated. Within an area of only 36 000 hectares it has a population of between 700 000 and 750 000 people. More than 500 000 of these are recognized by UNRWA as refugees; about 280 000 of them live in camps. Again, the rate of population growth is high, exceeding 3%.

11. The total Palestinian population of the OPT thus comes to between 1.5 and 1.6 million people. The geography is such that the West Bank is separated from the Gaza Strip. The population cannot move from one territory to the other without permission from the Israeli authorities.

(b) Agriculture in the economy

12. Agriculture has been the traditional mainstay of the West Bank and Gaza, which have little in the way of other natural resources. However, the proportion of GDP derived from agriculture has tended to decline, as in most developing countries.

13. In the late sixties and early seventies, agriculture accounted for 36-37% of GDP in the West Bank and 28-29% in Gaza. In 1986, the figures of the Israeli Central Bureau of Statistics show agriculture responsible for 32% of GDP in the West Bank, and 20% in Gaza. In 1986, the most important economic sector in the West Bank was "transport, trade and other services", with agriculture in second place, and construction third. In Gaza, "transport, trade and other services" again came in first place, followed by construction, public and community services, and agriculture in fourth position.

14. Agriculture is a major source of employment. According to official Israeli figures, agricultural employment in Gaza has remained roughly stable during the 1980s, but in the West Bank it has dropped by over 20%.

15. The economy of the territories has been in part sustained for many years by remittances from abroad. The Palestinian population originating from the West Bank and Gaza Strip and living in Jordan, Iraq, Kuwait and Saudi Arabia was estimated in the mid-1980s to be around 750 000. Out of this number, 190 000 Palestinians retained their identity cards and have return rights to the West Bank and Gaza Strip. Remittances from these Palestinians to their families in the OPT are estimated to have peaked at \$400-\$500 million per annum in the eighties. In addition, financial assistance to Palestinian institutions was provided on a substantial scale for many years by Arab States. Recent developments and their impact on agriculture are examined in the next section.

16. Another major prop to the economy has been work in Israel by Palestinians who travel daily from the territories. Between those with formal authorizations, and casual unauthorized workers, over 100 000 people from the territories were gaining an income in Israel in the mid-eighties. Here again, recent developments are analysed below.

(c) Agricultural development

17. In the West Bank 35% of the land area is suitable for cultivation, while in Gaza the figure is 52%. In the West Bank the area under irrigation is estimated at 105 000 dunums (10 500 hectares), i.e. 5.3% of the cultivated area and 1.5% of the total area. The rest of the cultivated land is rainfed. In Gaza the area under irrigation is estimated at 115,000 dunums (11 500 hectares), i.e. 62% of the cultivated area and 32% of the total area. Despite the potential importance of rainfed agriculture in the OPT (especially in the West Bank), it has been neglected to a large extent in recent years. The mission suggests that a study be made of the possibilities of strengthening rainfed agriculture in the territories.

18. This was exacerbated by the fact that patterns of land ownership and tenancy, and particularly the small size of holdings in the West Bank, hindered investment in mechanization and land reclamation. A summary of farm sizes is shown in the following table:

	Number of farmers	Percentage West Bank	Percentage Gaza
1 - 5	9 167	16	2.9
5 - 20	18 775	32	19.0
20 - 50	17 215	30	25.6
50 - 100	8 025	14	20.0
> 100	4 902	8	32.5

19. About 50% of the farmers in the West Bank have less than 20 dunums (two hectares) each. In the case of Gaza the sizes of holdings per farmer are larger, and in particular there are relatively more farms exceeding 100 dunums (10 hectares); this is explained by the long-standing pattern of ownership prevailing there, and by the type of farming practised.

20. Agriculture in the territories is largely export-oriented. The main export crops are citrus, vegetables and olive oil. Cereals and other basic foodstuffs are mostly imported.

21. In the years following occupation, and until the late seventies, the economy of the territories developed rapidly. Overall growth of GDP was in the region of 8-10% per annum. Since that time, increasing difficulties have been encountered, and the performance of agriculture in recent years has deteriorated rapidly. In part these problems were the result of occupation and Israeli policy of preventing competition with Israeli economic interests. In part, also, they reflected economic recession in the region, and mounting problems in export markets.

22. Since 1987, three major events have further transformed the economic and social structure of the territories.

23. Firstly, the Palestinian uprising, Intifada, began in December 1987 as a reaction to occupation and as an expression of the desire on the part of the Palestinians for self-reliance. Thus, the Intifada encouraged measures which minimized economic dependence on Israel and sought to rebuild the productive base in the OPT. It had a direct effect on agriculture through stimulating backyard production, including production of livestock. Israel's response to the uprising has also affected agriculture in several ways, all of them negative. In particular, curfews have seriously disrupted agricultural operations, and resulted in substantial crop losses. There have also been reports that many thousands of olive and fruit trees were uprooted as reprisals, either by settlers or by soldiers. In the climate of tension resulting from Intifada and the Israeli reaction, the economy of the OPT has declined to lower levels of activity. However, Palestinian institutions and community solidarity have in many ways been strengthened, and may well provide a base for underpinning agricultural growth in the future.

24. Secondly, in July 1988 the Jordanian Government decided on legal and administrative disengagement from the West Bank. This decision affected development in the OPT in several ways, including the following:

- Cancellation of the 5-Year Development Plan for the OPT (1986-1990). This plan was to deal with four strategic sections of the economy, i.e., agriculture, industry, housing and construction, and education.
- Retirement of Jordanian Government employees working in the West Bank.
- New regulations concerning the movement of goods as well as people between the OPT and Jordan.

The devaluation by about 50% of the Jordanian Dinar, which was legal currency in the West Bank and widely used as a medium for savings and large transactions, wiped out a significant part of the value of savings that had been accumulated there over many years.

25. Thirdly, the Gulf crisis has further affected economic conditions in the OPT. There has been a large drop in the level of remittances to the OPT from Palestinians working in the Gulf area, and indeed some resources have flowed in the reverse direction as Palestinians resident in the territories have had to help family members abroad. Financial support for the OPT from the Gulf States has also decreased. At the same time, the closure of frontiers in the region has cut off the territories from most of their traditional export markets in the Gulf area.

26. The agricultural sector is thus in the midst of a serious crisis, various aspects of which will be examined in the pages which follow.

27. In summary, major production problems face two of the most important Palestinian crops: citrus in Gaza is threatened by rising salinization of irrigation water, and grapes in the West Bank are being invaded by phylloxera. Export markets are in disarray as never before. Traditional markets in the Arab states are mostly closed, as just described. Markets in Eastern Europe, which were partly conducted on a barter basis, have fallen away as a consequence of the economic problems of that area. New openings to the European Community are promising, but have not yet achieved trade levels of economic significance. International markets for olive oil, the West Bank's most important product, are particularly weak. And above all, the territories are hemmed in by Israel, a major agricultural producer with serious difficulties of its own, bent on preserving its own markets and its own interests.

28. The territories undoubtedly have a very considerable potential for further agricultural development. However, this can only be realized if solutions are found both to the problem of markets, and to the constraints on access to water and land arising out of occupation.

29. The industrial sector has lagged due to lack of capital and markets, and contributes less than 7% to the areas' total GDP. The agro-industries have been growing due to the interest since the Intifada for processing surplus fruit and vegetables. The main agro-industries in the

OPT include: beverage production plants, distilleries and wineries, cigarette companies, micro-dairies, tomato canning plant, citrus packing plants, snack factories, pasta plants, pickling plants, and sausage plants. The mission to the OPT saw further possibilities in developing such industry through new produce such as almonds, figs, plums, flowers, seed, seedlings and animal feed, as well as better organization of existing citrus juice, grape juice and olive oil operations.

30. As described in a later section (paras. 164-171), recent changes in Israeli policies may provide more encouragement for the development of agro-allied industries in the future than has been the case in the past. The mission therefore suggests that a review be made of the practical possibilities of agro-industrial development in the above fields.

CROP PRODUCTION

31. There are marked differences between patterns of crop production in the West Bank and in the Gaza Strip.

32. In terms of area, the dominant crop in the West Bank is the olive, which covers about 44% of all cultivated land. Olive production, which is mainly for oil, is subject to a biennial cycle, the effects of which can be accentuated by differences in rainfall. The result is extremely wide swings from one year to another. For instance, production in 1988 amounted to over 160 000 tons, whereas in 1989 and 1987 it was less than 10 000 tons. Exports of olive oil have not been doing well: there is intense competition in the Mediterranean area, and other countries reportedly have lower production costs. Under the Italian aid programme arrangements have been set up for triangular transactions, whereby Italy purchases oil from the OPT to be given as aid to Third World Countries. There have been some practical problems of implementation, and the target of 6 000 tons has not yet been met.

33. The mission suggests that a comprehensive review be made of possibilities for increasing efficiency, and reducing costs, in the olive sector.

34. Another major crop is the grape, with the principal growing region around Hebron. Several varieties of table grape are grown, for both local and export markets. Unfortunately the area is experiencing an outbreak of the deadly phylloxera epidemic, which devastated European vineyards in the nineteenth century. The only cure is to grub up existing vines, and plant phylloxera-resistant root stocks onto which are grafted the desired grape varieties. There is a lengthy hiatus in production until the new vines are producing an economic yield. In the Hebron area, only about five percent of the vines have so far been replaced.

35. As explained in another section, there is a research problem in choosing the right root stock for production systems in the West Bank. There is also a question of whether farmers would be well advised to replace exactly the same varieties that they cultivated before, or whether market possibilities would suggest a shift in the choice of varieties. Farmers may need assistance in coping with the loss of income as vines are replaced. There may even be an issue of whether phylloxera-affected vines should be replaced at all, or whether alternative crops would be better.

36. The mission suggests that FAO organize a review of additional measures required to cope with the phylloxera epidemic threatening grape production in the OPT.
37. Measures in the field of crop protection are also needed for coping with infestations of the Mediterranean fruit fly on citrus, and of stem borers on figs.
38. The most dynamic crop sector in the territories is vegetable production. In the West Bank, with drip irrigation to maximize the efficiency of water use, combined with the adoption of agro-chemicals and improved varieties, production of vegetables has increased by a multiple of five over the last quarter century. The most important centre is the Jordan Valley, where the vegetable area is all under irrigation, and is responsible for about half of the territory's production. The basic problem is markets, which are examined later. If markets and water were available, there would be very large possibilities of increasing vegetable production in the Jordan Valley and elsewhere.
39. The area under field crops fell by almost a half between the late sixties and the mid-eighties. This was roughly offset by increases in yields so that total production (which can swing widely from year to year according to rainfall) remained within approximately the same range. In the particular case of wheat, the most widely grown field crop, the drop in area was more substantial, from about 46 000 hectares in 1966 to 19 000 in 1984/85.
40. In the Gaza Strip, citrus is the traditional focus of agriculture. The area under citrus doubled between 1967/68 and 1973/74, peaking at about 7 200 hectares. However, the citrus industry has run into extremely serious problems as a result of two factors. The first is the water crisis in Gaza, described in a separate section. Citrus is expensive in terms of water use, and generally not highly tolerant of salinity. Secondly, international markets have become so competitive, and prices so low, that it becomes ever more difficult to produce at a profit. The area under citrus has already fallen substantially (as it has in Israel), to about 6 000 hectares, and is expected to drop by another 15% in the near future.
41. There is thus a real question mark over the future of the citrus industry in Gaza. The mission suggests that FAO organize a review of prospects, in order to clarify the options for the future. The basic issue is how far resources should be invested in fighting to save the citrus (for instance, by adopting salt-resistant varieties on which research is being carried out in the Volcani Centre, combined with irrigation techniques to maximize water efficiency), or to what extent should the producers envisage the orderly reconversion of their properties to other types of crop. The problem does not lend itself to easy solutions. If they are going to remain in citrus, many producers will have to double the productivity of their farms in order to operate profitably. On the other hand, if they move out of citrus, it is not clear what they can move into, considering the weakness of many markets.

42. An example from the recent past, the cultivation of strawberries, shows what can be done if a niche market is successfully identified. Production of strawberries built up gradually between the early seventies and the mid-eighties, reaching almost 1 500 tons in 1985/86, of which about 400 tons were exported. One of the lines of progress for Gazan agriculture could be the exploitation of other specialized markets of this type. Current activities by the Civil Administration to promote the cultivation of carnations for export are based on this view. This is very labour-intensive work, which is being abandoned by Israeli farmers because of the high labour costs. It is also economical in water requirements. The exercise is still in the experimental phase. Other such opportunities should be sought.

43. For instance, the Gaza Strip has almost 2 000 hectares of almonds. One possibility worth exploring might be the cultivation of other types of nut tree, for which there are good markets in high-income areas of the world. There may be other suitable niche markets for flowers. The subject is followed up later in the section on markets.

44. The territories are at the moment without their own facilities for the testing and certification of seeds and seedlings. Such facilities, and possibly also a tissue culture laboratory, will be necessary if agriculture is to diversify into new crops. The mission suggests that FAO advise and assist in the creation of such facilities as clearly defined needs emerge.

45. The main environmental problem of the OPT is salinization, which is dealt with in the section on water. In addition, the farm community will have to give increasing attention to avoiding the pollution of groundwater by agrochemicals. The combatting of soil erosion and degradation must also remain a priority. FAO should be ready to advise on possible measures.

46. Crop production for export will have to aim at minimizing production costs. Energy is a significant cost factor. It is expensive because fossil fuels have to be imported, and there are scant possibilities of using biomass from wood or other sources. A careful watch should be kept on the feasibility of introducing low-cost rural energy systems, based on a combination of wind or solar power and conventional fuel. Technology continues to develop, and costs are falling, in such areas as photo-voltaic cells. This is another field in which FAO could provide advice. If and when warranted, an energy plan could be formulated to cover a variety of uses, including water lifting and pumping and domestic requirements.

LIVESTOCK PRODUCTION

47. The mission paid particular attention to livestock production because of its importance in Palestinian agriculture. In the West Bank it regularly accounts for about half the value of agricultural output. In the Gaza Strip the figure is about 30%. The analysis which follows is a summary of a more detailed technical note prepared by the mission's livestock specialist; the full note will be made available on request in English or French.

48. The livestock sector has progressed substantially since 1987, in large part stimulated by the Intifada which has encouraged self-sufficiency. At the same time, Israeli products have become relatively more expensive, as subsidies were removed. In all sub-sectors - milk, red meat, white meat and eggs - the West Bank is approaching or has reached self-sufficiency, but there are some deficits in the Gaza Strip. Since export prospects must be considered virtually non-existent, care will have to be exercised to avoid running into surplus production. Price volatility in broilers was evident at the time of the mission's visit, and at the market prices prevailing when it left many producers must be failing to cover their costs. The situation is complicated by the freedom of Israeli farmers to sell in the territories (a freedom which is not reciprocated, since producers in the territories cannot market their output in Israel); large consignments from Israel can overwhelm the market and drive prices down drastically.

49. Over the last twenty years, a small number of Palestinians have acquired an international-level knowledge of technology, and are running production units as modern and efficient as any in the region. However, these are the exception rather than the rule. In many cases, livestock production has been launched as a part-time occupation by people with only limited technical knowledge, often employing staff who are under-trained. This can account for relatively high rates of loss on many farms. There is a serious need for strengthened extension services, and farmer training, in the livestock sector.

50. The sector has to import virtually all its inputs (concentrates, veterinary medicines, even hay and straw) from Israel. A number of concentrate plants are being established, but even these depend on Israel for their raw materials. In this as in other agricultural fields there is a case for examining the feasibility of obtaining better prices through direct import of certain types of input.

51. Of more immediate effect for reducing production costs could be the use of agricultural by-products for animal feed. These could include by-products from the processing of olives and citrus, and from slaughter-houses. The mission suggests that a detailed examination be made of this possibility. The moment for this is particularly opportune, as a citrus plant for juice is being constructed in Gaza, and a series of new slaughter-houses are being planned.

52. The water requirements of the livestock sector are often overlooked in calculating the water needs of the territories. In most cases, water of a quality similar to that for domestic consumption is necessary. The mission has made a very crude and approximate calculation that the water requirements of the livestock sector in the West Bank come to just under five million cubic metres per year, while in the Gaza Strip the figure is slightly more than 1.2 million cubic metres.

53. In milk production, about half the output of the West Bank, and a fifth in the Gaza Strip, comes from sheep and goats.

54. In the bovine sector, Palestinian farmers have been able to take advantage of Israeli technology in animal breeding. The cattle herd consists mostly of high-performing Holstein-Friesian cows, developed in Israel. While there are some medium-scale dairy farms, by far the

greatest number of producing units consist of small farmers with two to four milk cows. These are especially prevalent in the northern part of the West Bank.

55. The main problem facing these farmers is the collection and transport of their milk, particularly in the evening. They generally have to carry their own milk to the nearest processing plant. Two trips a day become onerous, and in the evening there may in addition be security problems. To keep the milk until the next morning leads to a considerable risk of spoilage.

56. A solution to this problem could become easier through further development of a network of micro-dairy plants (capacity 500-2 000 litres) for milk processing at village level. A few such plants have already been put in place with international support, but their total number is inadequate, the siting has not always been well chosen, and their organization sometimes is unsatisfactory. The mission feels that this work should be supported by FAO, with the aim of ensuring a well-organized network, covering the needs of small farmers throughout the territories.

57. Sheep and goats currently number about 550 000 head in the West Bank and 20 000 in the Gaza Strip. Most of them are raised by bedouins following traditional grazing practices, but intensive rearing is also found. The goat population is dominated by the local Baladi race, but the numbers of higher-performing Shami are increasing. Among sheep, the fat-tailed Awassi predominates, with a small proportion of Israeli-developed Assaf suitable for intensive methods of rearing.

58. The traditional areas of transhumance have been largely abandoned as a result of their closure by the Israeli authorities. As a result, rangelands have in effect been substituted by cereal feeding. This leads to a loss of efficiency, since mature animals have a poor conversion rate for cereals but thrive on grazing.

59. Brucellosis, which affects both human and animal populations, is a serious problem. About 5-10% of the flocks are believed to be affected. A campaign to tackle the disease is under way, and should be supported by FAO. Use of micro-dairy plants, as described above, would eliminate the danger of its transmission to consumers through milk or milk products.

60. About 90% of red meat comes from lambs and kids. In the West Bank the mission estimates that needs are approximately covered by local production. In the Gaza Strip the mission had some difficulty with the available figures, but reckons that there is a substantial deficit.

61. A number of modern slaughter-houses are being planned in the larger localities. Greater attention should be paid in these plans to the recycling of by-products suitable for poultry feed.

62. The broiler industry has developed strongly in recent years, but the majority of producers are small in scale, poorly qualified and badly organized. In this sector there is a particular need for a training programme. There is also a need for one or two specialized slaughter-houses for poultry. According to the mission's calculations, there is a small production surplus in the West Bank and a deficit in Gaza. Prices are highly volatile, and the industry must be considered vulnerable.

63. Eggs are mostly being produced in medium- and large-scale units, using highly intensive methods. Until recently, producers were obliged to buy day-old chicks from Israel, whether for eggs or for meat. Now, however, the Civil Administration has given a small number of permits for the establishment of hatcheries. One project, financed by the private sector, is in operation.

64. The veterinary services of the territories will need to be strengthened by the recruitment of qualified young staff in the near future. Many of the present personnel will soon be reaching retirement age, and it will be important to ensure a smooth transition to a new generation of specialists.

65. For the future development of the livestock sector, the mission suggests a small number of experimental approaches that appear worth following up. In the Gaza Strip it could be useful to try out Atriplex spp., a Mediterranean shrub that can be used for browsing and is highly resistant to salinity. A small-scale experiment could be made on land that has become too saline for the cultivation of citrus or other crops. The economic and technical feasibility of expanding the very small area of forage crops in the West Bank could be explored. And an effort could be made to break into the export market for highly specialized products such as stuffed goose liver.

FISHERIES

66. The Gaza fisheries industry has known a spectacular rise and fall over the last thirty years. Before the 1967 occupation, fisheries was conducted according to simple, traditional methods. In the early years of occupation, the Israeli administration introduced outboard motors and other improved techniques. For a decade, the Gaza fishermen had an extensive area in which to ply their trade, extending south along the Sinai Peninsula. Following the Camp David agreement, Sinai was handed back to Egypt. Since then, the Civil Administration has drastically limited the fishing area. Sinai is out of bounds, and at the two ends of the Gaza Strip there are security zones opposite which no fishing is allowed. The fishermen can go no more than 12 miles out from shore. The total fishing area has been reduced to about 400 square kilometres of sea, and all fishing is closely controlled.

67. The number of fishermen, and of active fishing boats, has fallen drastically, as has the total catch. From being the second source of employment in the Gaza Strip, fishing has become little more than a marginal activity. The catch between 1979 and 1989 is shown in the following table:

Fish Catch in the Gaza Strip
(1979-1989)

<u>Year</u>	<u>Fish Catch</u> (tons)
1979	1 500
1980	1 200
1981	1 400
1982	1 300
1983	1 100
1984	1 000
1985	600
1986	300
1987	300
1988	300
1989	300

68. In 1991, there was a sudden extraordinary surge in the catch, which reached about 1 200 tons of sardines, all in the space of one month.

69. UNDP has contributed to a project for the installation of a cold store for newly landed fish.

70. Clearly, the fisheries sector in Gaza is a victim of political events, and in its present form has little prospect unless there is a lightening of the rigorous controls set by the Israeli authorities. This in turn can be assumed to depend on the evolution of the overall political situation.

71. The Civil Administration has suggested examining the possibility of establishing fish culture in the sea opposite Gaza Beach, through the creation of artificial islands. This type of mariculture is not widely practised in the Mediterranean, and a project would need careful study from the biological, engineering, marketing and economic aspects. From information gathered since its return to Rome, the mission feels the idea is worth a careful examination, although prospects of success should be judged cautiously. The mission therefore suggests that FAO examine both the feasibility of such a scheme, and also the prospects for aquaculture in those parts of the Gaza Strip where the well water is too saline to be used for irrigation.

FOOD CONSUMPTION AND NUTRITION

72. Comprehensive and up to date figures on food consumption and nutrition in the West Bank and the Gaza Strip were not available at the time of the mission's visit. Earlier in the year there had been disturbing reports of a serious deterioration in levels of nutrition as a result of loss of purchasing power. This resulted from the combination of factors mentioned in other sections of this report and connected with the Gulf War, principally a drop in remittances from Palestinian workers abroad, and suspension of the employment of day-workers in Israel for some months. Fortunately, the mission did not find any evidence of continuing malnutrition from these causes.

73. The historical data suggest that food availability in the territories has been improving roughly in line with the situation in the countries of the region. A published analysis of the evolution in the West Bank from 1964/66 to 1986/87 is given in the following table. It should be borne in mind that these figures show availability of food, and not consumption.

Food Basket - West Bank (1964 - 1987)

	1964/66	1973	1975	1979	1984	1985	1986/87
Food Consumption Level (kg/capita/annum)							
Wheat	120.3	128.0	128.1	123.7	119.0	120.5	118.3
Rice	13.4	14.7	12.9	14.1	14.8	15.0	15.1
Potatoes	13.0	18.0	22.9	16.9	19.0	22.1	21.8
Sugar	30.0	31.3	28.5	32.7	34.3	35.1	35.9
Pulses	11.7	10.0	11.2	7.9	10.1	10.6	11.3
Vegetables	143.6	112.4	164.7	161.3	150.2	151.9	182.6
Fruit	129.7	123.6	153.5	204.6	194.2	183.4	200.4
Meat	11.0	27.0	27.4	32.5	27.2	39.4	45.3
Eggs (kg)	52.0	71.0	4.0	4.4	6.0	4.6	4.6
Milk/diary	30.0	64.7	63.0	62.3	70.2	72.0	82.7
Oils	10.2	13.0	12.5	13.9	14.9	14.8	15.2
Fish	1.7	1.7	1.8	1.8	3.7	1.8	1.8
Energy and Nutritional Value of Food Basket (daily)							
Calories	2 430.0	2 719.0	2 761.0	2 833.0	2 861.0	2 857.0	2 925.0
Protein (g)	67.1	79.4	82.7	81.2	82.7	82.4	86.1
Animal							
prot. (g)	11.5	19.9	19.3	21.1	26.2	25.2	27.8
Fats (g)	51.9	65.8	67.2	70.8	78.8	76.9	80.9

Source: David Kahan "Agriculture and Water Resources in the West Bank and Gaza (1967-1987)" The West Bank Data Base Project 1987, published by the Jerusalem Post, p. 156.

74. With income levels currently unstable, the danger of malnutrition cannot be dismissed. Fortunately, UNRWA with its own nutrition programme is closely following the situation of refugees in the Gaza Strip, where the situation is particularly vulnerable.

WATER PROBLEMS

75. Of all the problems that affect the Palestinian agricultural sector, water is in some ways the most complex. It is complex because the requirements of agriculture are only a component (albeit the largest one) in the water needs of Palestinian society as a whole. Water requirements for domestic use are increasing continually, under the pressure of population growth and (during periods of economic growth) rising living standards. Furthermore, the water problems of the territories must be viewed in the wider context of the water problems of the region, starting with Israel. Water is a prime cause of tension in much of the Middle East.

76. Since 1967, Israel has closely controlled and restricted water use by Palestinians in the occupied territories. In the West Bank, for instance, the existing Jordanian legislation on water was replaced by a Military Order that requires a license for any operation concerning water; licences can be refused without giving reasons.

77. From the beginning, Israel has given priority to its own water needs and, in recent years, to the needs of the Israeli settlements. Particular bitterness has been engendered by the limitations on Palestinian water use for agriculture, while the settlements are allowed as much water as they require. Currently, drought has created water shortages in some areas for both Palestinians and settlers, as well as in Israel.

78. The problems of water take very different forms in the Gaza Strip and the West Bank.

79. The problem in the Gaza Strip is approaching - and perhaps has already reached - crisis level. The Strip is almost entirely dependent on wells. For decades, pumping has exceeded the rate of natural recharge of the aquifers.

80. There is no general consensus on exact figures, but it seems likely that pumping currently amounts to at least 100 million cubic metres per annum, and that this is about double the rate of recharge. Agriculture is responsible for about half of water consumption. While agricultural needs can be considered as static, domestic consumption of water is rising strongly with population growth exceeding three percent per annum.

81. As a result of the overpumping, there has been a gradual intrusion of seawater into the aquifers, possibly combined in some places with upconing from a deeper, highly saline aquifer. This has shown up in a widespread increase in the salinity of well water. In some cases the water is now too saline to be used for the irrigation of citrus, and a few wells have had to be completely abandoned.

82. The Israeli Hydrological Service made available to the mission an analysis of chloride concentrations in 370 wells in 1990. Exactly half, or 185 wells, showed more than 600 parts per million of chloride, a level at which certain types of citrus production become problematical. Out of these, 70 wells (or almost 20 percent of the total) had more than 1 000 parts per million, a level which greatly reduces the possibilities of crop production. The analysis by the Hydrological Service also showed that over the previous five years, 266 wells had increased in salinity while 104 had shown a decline. In 86 wells (or almost a quarter of the total) the increase in salinity had exceeded 100 parts per million of chloride.

83. In addition to salinization, groundwater in much of the Gaza Strip is being polluted from the surface, notably through urban sewage.

84. The Gaza Strip is thus engaged in an unsustainable use of water, and faces a major crisis at some point in the future. The implications for the citrus industry, and for Gazan agriculture as a whole, are dealt with separately in another section. In addition to the problems of agriculture, there is considerable anxiety even over the possibility of meeting the drinking water needs of a population expected to reach about one million by the year 2000. The problem of the Palestinian population is exacerbated by the fact that (on Israeli figures) about one and a half million cubic metres per year are taken for the needs of Israeli settlements in the Gaza Strip.

85. In recognition of the need to "reimburse" water taken for the settlements, and of the urgency for measures to deal with the impending water crisis, the Civil Administration is constructing a pipeline to bring fresh water from Israel to the central part of the Gaza Strip. This is scheduled to be ready in the first part of 1992, and will provide about five million cubic metres per year, equivalent to about ten percent of the non-agricultural requirements of the Gaza Strip. A plant for recycling the sewage water of Gaza City is at an advanced stage of construction with UNDP support. The Civil Administration is also examining the possibilities of using the reverse osmosis technique for the small-scale desalinization of well-water. And looking further ahead, it is considering a feasibility study of seawater desalinization.

86. Agriculture must play an active part in tackling the water crisis. One line of action is to seek maximum water efficiency, whether this means switching to more water-efficient crops or using more effective methods of irrigation. This is the main consideration underlying the study of the future of citrus production in the Gaza Strip proposed in another section. A second line of action is to introduce new ways of using saline water in agriculture. This is recommended as an initiative for FAO, which has done a good deal of work on this subject.

87. The situation in the West Bank is very different. The area is possessed of rich aquifers and springs. Here again, scientifically precise figures are lacking, but in broad terms it seems that the West Bank has a potential of about 600 million cubic metres of water per annum. There are three main aquifers, of which two are shared with Israel. The Israeli Hydrological Service estimates that about 90-95 percent of the potential is being used, with local cases of both overexploitation and underutilization.

88. According to various estimates, at least three-quarters of these resources are being used by Israel (including settlements in the West Bank), and probably less than one-quarter by the Palestinians. Agriculture is a major user on the Palestinian side, but the quantity available has remained constant due to a ban by the Israeli Civil Administration on the boring of additional wells. Each well is equipped with a gauge. The Civil Administration regularly checks the quantity pumped, the height of the water-table and the salinity of the water.

89. The data given to the mission by the Hydrological Service suggest that salinization is a problem, but much less acute than in Gaza. Out of 160 wells analysed, chloride in 1990 exceeded 500 parts per million in 34 cases, and 1 000 parts per million in 9. In another analysis of 158 wells, it was found that during the five years 1985-90, salinity had increased in 82 cases and declined in 76.

90. The mission found problems in the maintenance, repair and replacement of pumps. Permission for repair or replacement has to be obtained from the Civil Administration, and there were complaints from Palestinian farmers that the procedures were unduly slow. The mission was informed by the Civil Administration that they had been speeded up, and in an emergency could be granted very quickly. Nevertheless, it appears that farmers are not coping effectively with the situation, and are tending to postpone maintenance or replacement of pumps until the last possible minute, with a consequent loss of efficiency. The mission suggests that FAO set up an arrangement, in consultation with farmers' organizations and the Civil Administration, that would permit the regular and systematic maintenance or replacement of pumps providing water for agriculture.

91. Demand for water from the municipalities has been rising fast under the dual stimulus of expanding populations and improving living standards (leading to increased use of water per household). The Civil Administration has bored a number of deep wells which provide water supplies to the cities (as well as to the Israeli settlements). As in Gaza, there has been increasing evidence of pollution of aquifers by urban sewage, and a series of recycling plants are being planned or built. These will make "grey water" available for irrigation, usually with an admixture of fresh water.

92. A large part of West Bank irrigation water comes from springs, and a good deal of work is going into making the best possible use of this resource. For instance, the substitution of open streams by piping is reducing water loss.

93. With water supplies remaining roughly constant, one of the main objectives of Palestinian agriculture over the last twenty years has been to make the most efficient use of water for irrigation. Drip irrigation has been widely adopted, both in the Gaza Strip and in the West Bank (notably in the Jordan Valley). This has been one of the main driving forces behind the great surge in vegetable production from the territories.

94. The overall picture in the West Bank is dominated by competition between Israelis and Palestinians for water supplies. The Palestinians find the Israeli water regime oppressive, and oriented towards securing the greatest possible amount of West Bank water for Israel. The Israelis, for their part, state that they are only applying in the West Bank the same restrictions that they apply in Israel itself.

95. The fact remains that West Bank farmers have had their water supplies frozen at the level of 24 years ago, while large amounts of water have been made available for irrigation in Israeli settlements in the West Bank, and for use in Israel itself. For the moment, the lack of export markets rather than the shortage of water is the most significant factor limiting West Bank output. Should the market situation change for the better, West Bank farmers should be given access to any additional water supplies from West Bank aquifers that they may need in order to increase their production.

96. Future developments will, to some extent, unfold within a regional context of ever tighter water supplies. Agriculture is, in general, the most important consumer: in Israel, for instance, it reportedly accounts for more than two-thirds of all water use. To some extent the future availability of water will determine the future course of agriculture, but the reverse is also true: trends in agriculture can affect the availability of water for other uses. Political developments may also determine the possibility of a multi-nation agreement in the region which would ease the looming shortages in Israel and other countries.

97. The mission suggests that FAO undertake a study of the long-term water requirements of West Bank and Gazan agriculture. This would inevitably require looking at different scenarios (particularly for export markets). It should also, in an area in which feelings run high, lead to an objective assessment of possible needs, and ways in which they could be met.

98. In both the West Bank and Gaza, the mission suggests that a study be made of the possibility of introducing improved water harvesting techniques. While oriented in the first place towards small-scale and supplementary irrigation, this exercise might also help to solve domestic supply problems in the northern part of the West Bank, where about half the villages have no running water.

99. Finally, the mission wishes to record its impression that a useful role could be played by an independent, objective study of the overall water problem in both the West Bank and Gaza. An authoritative study accepted by all parties would provide a framework within which particular problems, such as water for agriculture, could be more easily resolved. This, however, is an issue that goes far beyond the competence of FAO.

LAND ISSUES

100. Land is probably the most highly charged single issue in relations between Israel and the Palestinians. Land, after all, is what the wars of the last forty-three years have in large part been about. It is therefore difficult to discuss the land issues of agriculture without mentioning political aspects.

101. The most significant of these arise out of Israeli policies for the appropriation of land in the occupied territories. There are three main purposes for which land has been appropriated: for military security; for the establishment of Jewish settlements; and for public purposes such as road building. According to circumstances, three different processes have been set in train: land has been declared as State land, and therefore available for use by Israel as the power exercising the attributes of the State; land has been expropriated for public purposes, with compensation payable to the owners; and land has been bought. The consequences are dealt with below.

102. Official Israeli figures are not available for the area of land appropriated, and a variety of estimates are in circulation. It appears likely that Israel has now taken direct control over between a half and two-thirds of the West Bank, and one-third of the Gaza Strip. By far the largest component is land closed for reasons of military security. The rate of land appropriation in the West Bank has markedly accelerated in the recent past.

103. The mission requested figures for agricultural land appropriated by Israel. The figures were promised by the Civil Administration, but were not made available. The Administration stated that agricultural land in actual use was generally not appropriated.

104. The situation described above influences agriculture indirectly and directly. In the first place, a substantial area of productive land has been lost to the Palestinian agricultural sector, and is now being farmed by settlers rather than Palestinians. While no official figures are known to the mission, a study of 1987¹ estimated the total agricultural area available to Israeli settlements at the equivalent of 56 300 hectares.

105. Another major loss to Palestinian agriculture consists in the extensive areas of rangeland which have been closed for security reasons. As described elsewhere in this report, small ruminants are the largest single component of the livestock sector. For these animals, intensive feeding based on concentrates is relatively inefficient compared with grazing on marginal land.

106. Land zoning, regional planning and building of highways for the main benefit of the settlements have also hampered the development of agriculture. Furthermore, restrictions on the mobility of labour and on freedom of movement from one sector to another have in some cases made it difficult to exploit agricultural land, or to get the right market value for land, whether destined for agriculture or for other purposes.

107. Israeli policies have another indirect effect on Palestinian priorities. In order to show that land is owned and cultivated, thus avoiding the danger of its being declared State land, considerable efforts are being put into land reclamation in hilly areas. The reclaimed land is then often planted in olives, a measure which can hardly be justified by market prospects.

¹ David Kahan Agriculture and Water Resources in the West Bank and Gaza (1967-1987), distributed by The Jerusalem Post, page 111.

108. Conversely, Palestinians are very reluctant to undertake afforestation, for fear that this would identify the land as publicly owned, thus inviting appropriation by Israel. Since afforestation would clearly bring great environmental benefits to the whole area, this situation can only be described as paradoxical.

109. The mission suggests that FAO undertake a study of the possibilities of afforestation and re-afforestation in the OPT. Presumably a major afforestation effort with international support would depend on an understanding with Israel regarding the non-appropriation of the land concerned.

110. In order to clarify the problems and potentials of using marginal lands for grazing, the mission also suggests a review of range management in the territories.

MARKETS AND MARKETING

111. The problems of marketing and markets are among the most acute facing agriculture in the OPT. Only through renewed access to traditional markets, and through the development of new outlets, can the farm sector hope to make progress.

112. The agricultural marketing structure, organizations and institutions are very weak. All operations related to harvesting, packing, transporting, grading, standardization, promotion of exports, advertising, which constitute the basic elements of agricultural marketing, need to be greatly strengthened. More storage facilities, mainly cold stores for deciduous fruits and citrus, should be built, and also more

- processing plants (grape and citrus juice, olive oil processing and refining)
- Slaughter-houses and wholesale markets in the main urban areas and major cities
- packing material and processing plants.

113. The small size of the local market in the West Bank and Gaza, and the type of agriculture prevailing, make it compulsory to develop export markets.

114. For many years the agricultural economy of the territories was linked with Jordan, the Gulf States and Iraq. Unfortunately since 1988 the exports of agricultural produce to the latter group of countries have been reduced drastically; and even exports to Jordan have been limited by the limited capacity of Jordan to re-export to the other Arab Countries. In 1988 the value of exports to or through Jordan fell by 33 percent to US\$ 52 million, far below the peak reached in 1982 of US\$ 125 million. In 1989, there was a further dramatic fall. In the two years from 1987 to 1989, exports of vegetables to Jordan, or to Third World countries through Jordan, fell from 36 000 tons to 580 tons. Over the same period, exports of citrus fell by 88%.

115. The most immediate cause of current OPT difficulties in traditional Arab markets has been the closing of frontiers as a result of the Gulf War. In addition, the OPT lost the benefits of the West Bank's special trading status under Jordanian law following the Jordanian disengagement in 1988 mentioned in an earlier section. These political developments have come on top of weak regional demand for imports since about 1982, as domestic production has been stepped up in importing countries. There has also been increasing competition from other exporters such as Turkey, Morocco, and Egypt. Other contributing factors include the inadequate marketing facilities in the OPT mentioned above, and the difficulties of developing dynamic new approaches under an occupation regime.

116. The Israeli market offers only limited possibilities for OPT produce. Exports to Israel are closely regulated, and free access is granted only for relatively minor items (for instance, figs and okra). Israeli agriculture has much higher labour costs than the OPT and a higher tax burden, but on the other hand has been able until recently to benefit from extensive subsidies. For economic and other reasons the subsidies are being drastically cut, but Israeli farmers still benefit from a very important subsidy on water.

117. Generally speaking, certain categories of OPT farm produce are probably becoming increasingly competitive price-wise in Israel, but are given little chance to compete due to the measures taken to protect Israeli farmers. Protectionism is an almost universal fact of life, but in this case it is one-way only. There is no way of protecting farmers in the territories from the disruption of their home market by the unrestricted sale of Israeli produce. Indeed, the OPT have long represented a major outlet for Israeli farmers. This asymmetrical relationship is compensated only to a small extent by privileges given to the OPT but not to Israeli farmers, in particular on the tax front. Part of the energies unleashed by the Intifada have been devoted to a reaction against this situation, through a boycott of Israeli produce and an increase in backyard cultivation.

118. After the Arab countries and Israel, the third option for exporters from the West Bank and Gaza is direct export to Western Europe, mainly the EEC.

119. The EEC authorities agreed in December 1987 to allow direct access of the OPT agricultural produce to the European Community on Most Favoured Nation terms. Under this agreement export permits could be granted expeditiously (12 days) by the Israeli authorities without delay or rejection if the request made by the Palestinian exporter is in accordance with the rules.

120. In theory and in principle this agreement is excellent, and could bring great advantages to OPT exporters. It has the following advantages:

- (a) stabilize the local market price of agricultural produce;
- (b) give incentives to farmers to go into more lucrative crops for export;
- (c) diversify the sources of income of the farming community;

- (d) bring the name of Palestinian agricultural produce to the international markets.

121. Regulations were established by the EEC specifically to facilitate the imports of fruits and vegetables from the OPT and customs reductions were enacted according to the following schedule:

<u>Description</u>	<u>Rate of Reduction</u>
1. <u>Vegetables fresh or chilled</u>	
(a) Onions and Garlic from 15 February to 15 May	60 %
(b) Tomatoes from 01 December to 31 March	60 %
(c) Sweet peppers	40 %
(d) Courgettes from 01 December to end February	60 %
(e) Aubergines from 15 January to 30 April	60 %
2. <u>Citrus fruit, fresh or dried</u>	
(a) Oranges (fresh)	60 %
(b) Clementines, tangerines	60 %
(c) Grapefruits	80 %
3. <u>Other fruits</u>	
Melons from 01 November to 31 May	50 %

122. Outside these dates the same products are admitted to the EEC market without any reduction of duties.

123. Following this agreement an UNCTAD/ITC study (June 1990) estimated that there is a potential of exports of 40 000 tons to the EEC out of which 25 000 of citrus fruit.

124. In 1988, direct exports to EEC markets on preferential terms commenced after two seasons of trial exports. But there were many administrative delays in the processing of exports by the Israeli authorities and shipping interests, with resultant spoilage of cargo. The Civil Administration assured the mission that there was no Israeli policy of disrupting direct export shipments. The result of these initial problems, combined with the impact of Intifada and the Israeli reaction, has been a slow start to the programme of exports to EEC.

125. In order to be objective when examining the longer-term potential of OPT exports to Western Europe, one must bear in mind the following problems and difficulties:

(a) Intense competition from many existing exporters to the EEC, such as Morocco, Senegal, Kenya, Brazil, Chile, Egypt, as well as from producers within the EEC itself (Spain, Italy, Holland, and Belgium), without forgetting Israel which is an active exporter to Europe. The OPT will find it extremely difficult to compete on both price and quality.

(b) The OPT will be exporting via an Israeli port or airport. It will be difficult to get transportation terms and conditions equalling those of competing Israeli exporters, and virtually impossible to get better conditions.

(c) Finally, it should be borne in mind that the Arab market is the natural geographical outlet for the OPT. Over the longer term, it could well be easier of access, and could offer higher profits for the OPT farmers, than the EEC market.

126. Eastern Europe used to be a good market for the export of citrus from Gaza and other products, partly on a barter basis. However, as a result of the economic difficulties of the region exports from the OPT have declined drastically. Over the longer term there should be prospects for a recovery.

127. The recovery of old markets, and the development of new ones, are both of key importance for the future of OPT agriculture. FAO should join the international agencies already active in this field, and lend whatever technical support it can. The Trade and Marketing Promotion Centre, now in the process of establishment with support from UNDP and the International Trade Centre, could play a very valuable role in this endeavour.

128. Quality control is vital for success in ever more competitive international markets, and assistance may be required to achieve the highest standards. Grading and packaging are often in need of improvement. Market intelligence will need to be strengthened. Efforts to identify niche markets should be stepped up, especially in floriculture. International support will be called for as specific needs crystallize.

INSTITUTIONS

(a) General

129. Following the 1967 occupation, the Israeli authorities took over and have since maintained the Departments of Agriculture established by Jordan in the West Bank and the Directorate-General of Agriculture established by Egypt in the Gaza Strip. These now form part of the Civil Administration, to which are also attached Israeli staff out-posted from the Ministry of Agriculture. By way of example, in Gaza there are six out-posted Israeli technicians, while the Directorate-General includes 83 Palestinian technical staff.

130. In the West Bank, the Departments of Agriculture have six offices and eight sub-offices. They include a total of 162 Palestinian staff, consisting of 55 persons engaged on extension work, 12 on veterinary affairs, 21 on livestock inspection and assistance, 18 on forestry and 56 administrative staff, drivers, etc.

131. During the early years following the 1967 occupation, the Israeli authorities built up the Departments very significantly, with a view to stimulating agricultural modernization in the occupied territories. Since the mid-seventies, as a result of both political and budgetary factors, the resources available to the Departments have been greatly reduced.

132. The Departments have a status that is unique in the agricultural sector, in that they are pre-1967 institutions, staffed by Palestinians, yet working within the Israeli Civil Administration. The mission was impressed by their devotion to helping Palestinian farmers, despite their difficult situation in a time of high political tension. The substantive work of the Departments is covered in the following sections.

133. Statistics relating to the agricultural sector are collected by the Israeli Central Statistics Bureau. A section on the territories is included in the Bureau's annual Statistical Abstract, and there is also a regular publication devoted exclusively to the territories. Neither publication gives figures on agriculture in Israeli settlements in the West Bank and Gaza. Information regarding water in the territories is collected by the Civil Administration, but much of it is not made available.

134. The mission felt that the most serious single problem they encountered was the lack of any institution for planning and coordinating activities in the agricultural sector. The Civil Administration provides many services, but it is not its role to look at options for development, and decide on the use of resources, from the point of view of the Palestinian people. The Palestinians themselves have not established an institution, acceptable to the Civil Administration, which could do this on a day-to-day basis. There are several highly professional study groups, but they do not have an operational role. The issue is very delicate politically, but it would be in everyone's interest to find an acceptable solution as soon as circumstances permit.

135. There is also a need for a monitoring system covering programmes and projects in the OPT agricultural sector. Individual agencies or groups of organizations naturally have information on their own activities, but there is no general database in the territories covering the sector as a whole.

(b) Agricultural research

136. Until the late seventies, there was an extensive network of research stations in the West Bank: eight stations were in active use in 1974, a higher number than in 1967. However, in later years budget support and the levels of activity declined. At the time of the mission's visit there was no substantial research being carried out in the West Bank, while in Gaza activities were modest in scale. Unused research stations were being farmed by the Civil Administration. Some research on a modest scale is being carried out by NGOs.

137. Palestinian farmers are able to draw considerable benefits from technology developed in Israel, whose research has a world reputation. For the greater part, such technology reaches the territories through market and informal channels.

138. In addition, some technology transfer is fostered from the Israeli side: for instance, there have been organized visits by Palestinian farmers to the Volcani Research Centre. Currently, four employees of West Bank Departments of Agriculture are studying for masters' degrees at the Hebrew University. In general, the mission found no reluctance on either the Israeli or the Palestinian side to the introduction of new Israeli-developed technology into the territories.

139. The OPT can thus make use of Israeli facilities for basic, strategic and applied research. However, they still need to have their own facilities for adaptive research. This is currently defined as research "to adjust technology to the specific needs of a particular set of environmental conditions". The mission came across a number of cases where adaptive research was needed. One example related to the choice of phylloxera-resistant root stocks in the Hebron area, where - because of the particular conditions - the root stocks used in Israel did not appear fully satisfactory. Again, the mission believes there is a good case for research on economic possibilities of introducing forage crops on a wider scale into the farming systems of the northern part of the West Bank, and of using Atriplex spp. for the browsing of livestock on the highly saline soils of the Gaza Strip (see para. 65).

140. Adaptive research of this type is highly location-specific, and is difficult to carry out on a single central research station. Rather, the mission would advocate that there be a single focal point for the organization of adaptive research, with physical activities being carried out on a decentralized basis. The focus might be placed in the Department of Agriculture of the University of Hebron, the only agricultural faculty so far authorized in the territories. There would probably need to be formal arrangements for cooperation between the focal point, the Departments of Agriculture, and other organizations interested in research. This approach would need to be worked out in consultation with all parties concerned, and of course funding would have to be found.

(c) Agricultural extension, education and training

141. Extension services have followed the same pattern as that of agricultural research. After the 1967 occupation, the number of extension workers increased to a high of 300 officers in 1976, including 133 senior extension specialists. Extension activities included: demonstration plots for testing of new crops and improved agricultural practices, plant protection, soil conservation, veterinary services, reforestation, and range management. The subsequent reductions in budget and staff have obviously had a detrimental effect on the impact of the extension services.

142. Field studies carried out to evaluate the efficiency of agricultural research and extension in the OPT reveals the following:

- More than 50% of OPT farmers do not have contact with extension agents. In the West Bank a ratio of 508 farm units to each extension worker is in place as compared to a ratio of 217 farm units per extension worker in 1976.

- Extension workers concentrate their efforts on prosperous villages and coastal areas at the expense of poor villages and those residing in hilly areas.
- Appropriate attention has not been given to a number of agricultural sub-sectors, such as irrigated cereal crops, fruit and olive production and animal husbandry.

143. With the official extension services of the Departments of Agriculture greatly reduced in scope as compared with previous years, a number of organizations are moving into the field of extension. These include cooperatives and NGOs. While they can play a useful role, there is no overall plan to ensure that the most important unfilled extension needs are systematically met. The mission believes that work on such a plan, leading to a strengthening of the extension function in the territories, should be supported by FAO.

144. The territories have many agricultural graduates who could build up a stronger extension network. However, they would need training in practical extension methods. Furthermore, a strengthening of extension as such would be of little value if it was not accompanied by more systematic arrangements for extension agents to be kept abreast of developments in technology: they must have something useful to offer farmers.

145. Such a plan would also have to deal with the institutional options for a strengthened extension service, including the respective roles of the Departments of Agriculture and the various organizations active in the field.

146. The plan could at the same time examine the desirability and feasibility of providing specialized advice on farm management, making use of the many advances in this field during recent years. A closely related area to be looked at is investment in agriculture, including advice for potential investors coming from outside the sector.

147. The plan could also deal with agricultural education and training. In past years, two long-established agricultural schools at secondary level in the West Bank, and one in Gaza, have turned out many trained people who are now active in the sector. However, these schools are far from prospering: those that survive have few pupils, and one has been turned into an institution for training in community development.

148. At the higher level, the Civil Administration has approved the establishment of a Faculty of Agriculture in the University of Hebron, but this is still in its formative stage. Palestinians wishing to pursue agricultural studies have been obliged to do so abroad, and have often returned with little practical knowledge and training.

149. The suggested plan could take an overall view of OPT needs for agricultural education and training, in the light of the increasing sophistication of the sector, and the requirements of a strengthened extension service, and the desirability of giving short-term practical training to people who have studied agriculture but lack hands-on experience.

150. Education and training should give prominence to the environmental aspects of agriculture, including the conservation of soil and water, and the avoidance of pollution through agro-chemicals.

(d) Agricultural Credit

151. The 1967 occupation of the West Bank and Gaza led to drastic changes in the financial and monetary system of the area. The eight Arab commercial banks with 26 branches in the West Bank and the three commercial banks with four branches in Gaza were all closed, as was the Agricultural Credit Corporation (ACC), a main source of credit for farmers. The ACC, which initiated activities in 1959, provided medium-term and long-term loans to farmers through credit cooperatives and other organizations.

152. Thereafter, Israeli currency was declared legal tender in the OPT although the Jordanian Dinar could also be used as legal tender in the West Bank. Israeli banks were allowed to open branches in the OPT, and in May 1986 a total of four Israeli banks with 22 branches were operating there. In the course of the 1980s, two Arab banks were granted permission to reopen. The Bank of Palestine reopened in 1981 in Gaza and the Cairo-Amman Bank in 1986 in Nablus (West Bank). Both banks operate under stringent banking rules and regulations imposed by the Bank of Israel. Thus, neither bank has been allowed to develop full banking functions and act as financial intermediaries between lenders and borrowers. In addition, the closure of operations by the Israeli Leumi Bank operations after the Intifada began in 1987 has further debilitated the financial sector.

153. Recently, businessmen in the OPT have obtained approval after lengthy negotiations with the Israeli authorities to establish an indigenous bank with four branches in the West Bank. The bank is to initiate activities with a capital of US\$15 million and is to provide commercial services in both Israeli and Jordanian currencies.

154. At present, the absence of a functioning cooperative credit system and of adequate financial institutions greatly reduces the ability of farmers to invest in agriculture. For the purchase of agricultural inputs and implements, farmers in some cases depend on their suppliers to provide seasonal or short-term loans. This is done without charging interest, but at the cost of an increase in sale prices. Such an arrangement can be equivalent to paying an interest rate of about 30%. In other cases, marketing middlemen provide agricultural inputs to farmers with a binding arrangement that farmers sell their produce at the middlemen's wholesale shops.

155. Agricultural credit is also available in the OPT through private voluntary organizations and bilateral aid, generally in the form of grants. Such aid, although very helpful to farmers, is not without drawbacks. Credit availability is usually not linked to seasonal requirements, and above all the fact that it is given on a grant basis is

not conducive to training the farming community in loan application and repayment procedures. The mission was given the following figures (in US dollars) for agricultural credit currently provided by some NGOs and bilateral donors:

Near East Foundation (end 1987) - \$8 410
Welfare Association (July 1991) - \$430 887
EEC (May 1990) - \$1 010 000
EEC (June 1991) - Medium-Term Projects - \$378 000
Spain (May 1991) - \$485 000
Qatar (January 1991) - for Arab Society for Credit and Cooperatives - \$16 460
Canada (June 1990) - \$20 000
France (January 1991) - \$186 474

156. The PVOs which, according to information given to the mission, have been active in assisting farmers in agricultural credit and related technical assistance are the American Near East Refugee Aid (ANERA), the Technical Development Group (TDG) and the Economic Development Group (EDG). ANERA was established in 1976 and provides funding for development projects approved by the Israeli authorities. The EDG is active in disbursing small- to medium-sized loans funded by the EEC and other NGOs. By August 1989, EDG projects totalled 160 at an interest rate of 2-4% charged to the borrower. The TDG is a new organization which came into existence to fill the gap in technical assistance and training for loan recipients. The areas covered by technical assistance include management, marketing, and prospects for developing the food processing industry.

157. It can be concluded that there is an urgent need not only to create a viable financial system whereby the availability of credit is formalized, but also to train existing institutions already in place in the concepts of loan applications, disbursements, and repayments. The creation of a sound credit cooperative system would institutionalize the availability of credit on appropriate terms. It would also increase the opportunities for expansion in areas of agricultural development which have been neglected so far, such as funding for land reclamation projects.

158. There is one development which may alter the picture somewhat. The new Israeli policy on economic development in the territories, described in a later section, cannot be successfully implemented without sources of credit. The mission was informed that a more liberal approach would be taken to applications from banks to operate in the territories. One such application, from a bank with earlier experience in the area and now under Australian ownership, was at an advanced stage of processing. It therefore seems possible that additional sources of credit, at least on commercial terms, may become available in the future.

(e) Cooperatives

159. The cooperative movement flourished in the West Bank between 1948 and 1967 to the extent that by December 1966 there were 176 agricultural cooperative societies with a total of 9 000 members. Of these, 143 were small-scale credit operations and the remaining 33 had severe organizational problems. After the 1967 occupation, the West Bank

operations of the Jordanian Cooperative Organization (JCO) were frozen and activities of the other cooperative societies were curtailed. In 1976, restrictions on cooperatives were eased and the Joint Jordanian Palestinian Committee (JJPC) was formed to channel agricultural funding through cooperatives.

160. The total number of cooperatives at the end of 1984 was 236, the breakdown of which was as follows:

**West Bank agricultural cooperatives by type
and period of registration as of 31 December 1984**

Type	Period of Registration		Total
	Before occupation	After occupation	
Credit	141	1	142
Livestock	7	14	21
Olive presses	9	13	22
Multipurpose	11	-	11
Marketing	11	29	40
Total	179	57	236

Source: George T. Abed The Palestinian Economy (1988) p. 157

161. It should be noted that the figure for registered cooperatives is misleading as only a small number are active in providing services to the farming community. One source notes that the number of functioning agriculture cooperatives is only about 30 of which 50% are olive press associations. In addition, the role of agriculture marketing cooperatives in the OPT remains minor as it is limited to issuing of export licenses to Jordan with the required certificates of origin. However, two marketing cooperatives which are active are the Jericho Agricultural Marketing Cooperative (JAMC) and the Beit Lahia Marketing Cooperative (BLC). The JAMC exports aubergines directly to the EEC and the BLC assists members in exporting strawberries and vegetables to Europe.

162. The mission has noted after visiting cooperatives in the OPT that external financing from bilateral donors and NGOs has in some ways hindered the proper development of the cooperatives in that such funds are viewed as a grant and not a loan which should be repaid. Thus, there is an urgent need to re-educate cooperatives in effective management of funds and loan repayment. The experience of the JJPC is a good example of vast amount of funds having been disbursed in the OPT without concrete results. The Agricultural Cooperative Union (ACU) should play a major role in implementing a sound training programme in cooperative education. An exercise of this type might be supported by FAO.

(f) Role of women in agriculture and rural development

163. The mission was struck by the relatively little attention paid to the role of women in agriculture and rural development. The public and private institutions of the sector could benefit from a greater presence of active women, and rural women could be helped more easily by institutions that were not male-dominated. While some work is being done on the subject by NGOs, much more appears to be needed, including fuller information on women's role and the ways in which they could be helped. The mission feels that FAO should promote and support additional work in this area.

RECENT CHANGES IN ISRAELI POLICY

164. The policy of the Israeli Civil Administration was expressed in 1986 in a sentence that has often been quoted: "The administration diligently develops services for the welfare of the local population, and encourages local and external initiatives in the economy and the development of new projects - this, of course, provided that there is no conflict with the security and economic interests of Israel". The primacy given to Israeli economic interests, as made explicit in this declaration, has been one of the most bitter sources of contention between Palestinians and Israelis. It has been seen by Palestinians as the mainspring of Israeli action, particularly in the field of agricultural trade where there are innumerable possibilities of competition between producers in the territories and producers in Israel. It resulted in an extremely cautious attitude by the Civil Administration towards the approval of new projects, a process which could take many months or even years.

165. The mission was informed on several occasions that Israel had recently adopted a modified approach, based originally on a study of the economic prospects of Gaza. The mission, at its request, met the main author of the study, and received a briefing on the general considerations that underlay it. Since this approach may lead to new opportunities for agricultural development and particularly for agro-industrial development in the territories, the main points are briefly summarized. It should be noted at the same time that a considerable effort is going to be needed if the approach is to produce genuine endogenous development, as distinct from the establishment of low-cost subsidiaries for Israeli enterprises.

166. Israeli concern, in this context, is with the dangers of mass unemployment and heightened instability in the territories. The problem is mitigated at present by the fact that tens of thousands of Palestinians commute to work in Israel. However, much of this work is in the construction industry, and is not expected to continue for more than another four or five years. After that time, there will probably be falling-off of employment in Israel, and a corresponding rise in the already alarming rate of unemployment in the territories, especially in the Gaza Strip. The main objective of the new policy, therefore, is to generate employment in the territories.

167. To that end, the Administration is deliberately fostering the establishment of new enterprises that will provide employment. For that purpose, it is creating industrial estates with the necessary infrastructure, offering tax concessions to newly established companies,

and promising speedy action on applications. Although the policy is formally restricted to the industrial sector, the mission was informed that intensive agricultural production would be treated as an industrial enterprise.

168. Labour costs in the territories are much lower than in Israel. The actual cost to an employer would, according to the mission's information, probably be about half. The new approach will therefore presumably tend to attract Israeli firms to set up subsidiaries in the territories. However, the mission was informed that this was not the essential purpose of the new measures, and that facilities would be available to indigenous and foreign concerns unconnected with Israel.

169. So far as trade aspects were concerned, the enterprises would be able to benefit from the international agreements now covering Israeli exports, for instance to the EEC and the United States. On the other hand, there would be no change in the regulations governing access by the territories to the Israeli domestic market.

170. The new approach, if it is to make any dent in the problem of unemployment, obviously requires capital on a much larger scale than the modest possibilities of agricultural credit now found in the territories. The mission was assured that a liberal approach would also be taken to applications from banking institutions wishing to start business in the territories.

171. It is impossible for the mission to judge how much impact the new measures will have, and on what time scale. Much, obviously, will depend on how the new policy is applied. But there is one point that seems worth making. If the international private sector could be encouraged to take a stake in the territories, and if it were possible to ensure a convergence of interests between the Palestinians and the entrepreneurs, there could be a significant potential for OPT development.

ROLE OF INTERNATIONAL ORGANIZATIONS, INCLUDING NGOS

172. The Israeli authorities have authorized a number of international organizations, both intergovernmental and non-governmental, to operate in the OPT. Individual projects are each subject to approval by the Civil Administration. The following paragraphs describe the work of the main organizations encountered by the mission that are active in the field of agriculture.

173. The United Nations Development Programme (UNDP) has had a Programme of Assistance to the Palestinian People since 1980. For the five-year period 1992-1996, the Governing Council has allocated resources of \$15 million for the Programme. These funds are supplemented by special contributions from donor governments for assistance to the Palestinian people channelled through UNDP. Programme delivery in 1990 came to almost \$12 million.

174. Agriculture is a major component of the UNDP Programme. FAO has cooperated in one project, now completed, for training in agricultural development through specialized courses abroad. Other completed projects

have provided refrigerated storage, equipment and facilities for fishermen in the Gaza Strip, and equipment and technician training for agriculture and hydrology laboratories, also in the Gaza Strip.

175. Projects now under implementation include the strengthening of a laboratory for the analysis of olive oil for export, the development of beekeeping, the development of modern irrigation in the Gaza Strip, the establishment of a facility in the Gaza Strip for the grading and packing of vegetables for export, and the development of a citrus processing plant, also in Gaza. A number of other projects are of interest to agriculture as well as other sectors. These include the recycling of sewage (providing grey water for irrigation), and preliminary work on the establishment of a Trade and Marketing Promotion Centre, being carried out in association with the International Trade Centre. A Business Development Centre, recently relaunched after initial problems, also has considerable potential for helping the agricultural sector. A number of other agricultural projects are in the pipeline.

176. The UNDP Jerusalem Office has indicated that it will greatly welcome FAO advice and cooperation in the agricultural component of the Programme of Assistance.

177. The United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA) devotes the great bulk of its activities to the running of refugee camps, including the provision of food, health, education and other services. The Agency has recently decided to expand the scope and volume of a programme to promote income-generating activities in the OPT. To that end, it is embarking on a five-year programme of investment in small and medium enterprises and related economic infrastructure. Some of these activities are likely to extend to agriculture, and the Directors of Operations in the West Bank and the Gaza Strip are interested in FAO cooperation on technical aspects.

178. The EEC is a major source of assistance to the OPT. It is providing aid at a level equivalent to about \$15 million per annum, and in addition is making a special contribution in 1991 of 50 million ECU in recognition of the current hardships of the Palestinian population. A significant part of this aid is going to the agricultural sector, for instance in the form of funding for agricultural credit. In addition, the Community has concluded an agreement giving special entry privileges for OPT produce, as described in paras. 119-124.

179. As an example of the important contribution which can be made by a non-governmental organization, the mission would quote the work of American Near East Refugee Aid (ANERA). This organization has an annual operating budget in the region of \$3 million, of which about two-thirds goes to agriculture. It is supported by USAID and by private contributions, and finances a wide variety of activities, mainly carried out through cooperatives. These range from the provision of heavy equipment for land reclamation to assistance with market intelligence. The mission saw some particularly valuable work being carried out by ANERA in the dairy sector, including support for a campaign against brucellosis, and for the provision of micro-dairies for milk processing at village level.

POSSIBLE TECHNICAL INTERVENTIONS BY FAO

180. At various points in this report, the mission has put forward suggestions for possible technical interventions by FAO. The present section recapitulates these proposals, and also incorporates some useful suggestions that were advanced at the Symposium on the Palestinian Agricultural Sector (FAO, Rome, 9-11 October 1991).

181. This should not be considered as a closed list. In the course of even a few months circumstances can change, some problems may be resolved and others may emerge.

182. The most urgent area for action, in the mission's view, is the first proposal below, relating to citrus production in Gaza.

Crop production and protection

- study of future of citrus production in Gaza Strip (paras 40-41)
- additional measures for coping with phylloxera epidemic in grapes, stem borer infestation of figs, and Mediterranean fruit fly in citrus (paras 34-37)
- possible improvements in olive production and marketing (paras 32-33)
- new crops, including tree crops (especially nuts) (paras 42-43)
- introduction of facilities for testing and certification of seeds and seedlings and possibly for tissue culture (para. 44)

Livestock

- possible use of agricultural by-products as feed (para. 51)
- improved network of micro-dairy plants (paras 55-56)
- support for the brucellosis eradication campaign (para. 59)

Fisheries

- possible development of aquaculture in Gaza Strip (para. 71)

Markets/marketing

- strengthen efforts to improve market intelligence, grading and packaging (paras 127-128)
- search for new niche markets, especially in floriculture, in cooperation with project of International Trade Centre (paras 127-128)

Agro-industries

- review of development possibilities in agro-industrial fields of direct concern to FAO (para. 30)

Water problems

- study of long-term water problems of West Bank and Gazan agriculture (para. 97)
- additional ways of using saline water for agriculture (para. 86)
- arrangements for systematic maintenance and renewal of irrigation pumps (para. 90)

Land issues

- possibilities of strengthening rainfed production (para. 17)
- afforestation and range management (paras. 109-110)

Institutions

- prepare overall plan for strengthening of extension function and of agricultural education and training (paras. 143-150, also paras 49 and 64)
- strengthening of research function to meet location-specific needs (paras 139-140)
- training programme in organization of cooperatives (para. 162)
- advisory service on farm management and investment in agriculture (para. 146)
- programme and projects monitoring system (para. 135)

Role of women

- prepare programme of assistance to the organizations promoting the role of women in development (para. 163)

Environment

- protection against pollution from pesticides and over-use of fertilizers (para. 45)

183. Specific action in any of these areas would need careful advance study, in greater depth than was possible in the course of the mission, and would of course require funding. The modalities of action could follow those adopted by existing programmes, in particular that of the UNDP.