

# IPCRI

*Israel/Palestine Center for Research and  
Information*

**The Harmonization of Agricultural Health,  
Phytosanitary and Quality Standards for  
Fresh Fruits and Vegetables between  
Egypt, Jordan, Israel and Palestine**

**A Strategy for Cooperative Regional Export  
Marketing of Agricultural Products**

January 2001

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Israel/Palestine Center for Research and Information

**Workshop on the Development and Implementation of the Taba  
Conference Resolution on Harmonization of Agricultural Health,  
Phytosanitary and Quality Standards for Fresh Fruits and  
Vegetables between Egypt, Jordan, Israel and Palestine**

May 15-16, 2000

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## **Foreword**

In May 15-17, 2000 IPCRI convened the third regional seminar on agricultural cooperation between Egypt, Jordan, Israel and Palestine. This time the seminar was held in Jerusalem. Representatives of the Ministries of Agriculture of the four countries participated in three days of intensive and productive

meeting was an agreement to recommend to the main policy makers that the four countries must develop a common agricultural policy with regard to export. In this regard, the participants unanimously agreed that planning should begin for the creation of a common market label for determined products and that a joint cooperative marketing strategy be established and tested as soon as possible.

In January 2001 at the time of publishing this book, the dreams that were outlined in May 2000 at the conference seem like detached from the realities that have developed since September 2000. We believe that eventually the region will return to the course of peace and the need for regional cooperation will re-emerge. At that point, the policy makers will be able to refer to this publication to help steer them back towards practical and important means for bringing more economic welfare and prosperity to all the people of the region.

*We believe that this publication is very relevant and important and will help to chart a course for true partnership of the countries and peoples of the region.*

*IPCRI*

*January 2001*

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### Introductory Presentations and Discussion

**Gershon Baskin (IPCRI)** The goal of this workshop is to make recommendations that can be brought back to the Ministries of Agriculture in the four countries. If we make progress and together devise a suggested plan of action, it is then the role of the governments to decide whether or not they want to accept our recommendations and move forward at the official level.

We are talking about issues that concern law. There are agricultural laws in each one of the four countries. There are regulations and standards that are part of the legislation of our countries. We're talking about issues that are based on governmental decisions. But again, we are not making governmental decisions here, and we are not coming out with a treaty.

What we can do is come up with a set of recommendations and plans. In the next stage, these will have to be brought back to our governments. These recommendations and plans will motivate the four countries to work together for the mutual benefit of the people in this region by moving forward in the area of greater and wider regional cooperation with regard to agricultural standards and cooperative marketing plans and so on.

This conference is based on recommendations that were made a year ago at the last IPCRI conference in Taba. On May 23, 1999, at the end of that conference, we drafted a page of recommendations. The main recommendation is the basis for today's conference.

CONFERENCE ON REGIONAL AGRICULTURE -

FACING THE EUROPEAN MARKETS

IPCRI and Konrad Adenauer Stiftung

May 23, 1999

Taba Hilton

**Main Recommendation**

*The participants of the IPCRI-KAS conference on Regional Agriculture with representatives from Egypt, Israel, the Palestinian Authority and Jordan agree on the following:*

- 1. We appeal to the Ministries of Agriculture from the four countries to convene a quadra-lateral forum for the purpose of proposing and harmonizing appropriate quality and safety standards for fresh horticultural products. The quadra-lateral forum could also work on the development of a common agricultural export marketing strategy and scheme for the benefit of all four countries.*

IPCRI has launched a new effort aimed at implementing this resolution.

This is an extremely complex effort that will deal with three types of standards:

- Phytosanitary
- Health standards
- Quality standards

Between four countries: Egypt, Jordan, Israel and Palestine and will confront the following issues:

- Legal arrangements and mechanisms: legislation, by-laws and regulations
- Mechanisms for testing and checking
- Mechanisms for enforcement
- Mechanisms for educating and training of professionals and farmers

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IPCRI has launched a new effort aimed at implementing this resolution -- this conference. This is an extremely complex effort that will deal with three types of standards: phytosanitary, health standards on fresh fruits and vegetables, and quality standards. In the process, we will confront the following issues: legal arrangements and mechanisms (legislation, by-laws and regulations), mechanisms for testing and checking, mechanisms for enforcement, and mechanisms for educating and training of professionals and farmers.

Our goal at this conference is to seek mechanisms for creating harmonization of plant protection in the region. These mechanisms should allow us to import and export to each other more freely. They also, and perhaps most importantly, should allow us to cooperate in exporting our agricultural goods to the important markets of Europe -- and perhaps other parts of the world -- which are becoming more and more centralized, and which demand greater quantity. This will require each of us to cooperate so we can enjoy a larger share of the wealthy European market.

We are also aiming at creating systems that protect the farmers. As experts in plant protection, we know the importance and the difficulty of quarantine. None of us wants to introduce diseases or pests into our area that will jeopardize the agriculture of the entire country. Each one of our countries has standards that have already been set up and that are working to protect our agriculture. Now we need to examine how these four countries, with their existing standards, can work together to harmonize those standards.

We are not proposing the acceptance of any kind of downward movement in quarantine and plant protection standards. That would mean automatic rejection by the government officials who have to accept the standards. We are talking about moving upwards, and perhaps accepting international standards as a guide.

In 1951, the International Plant Protection Convention was first agreed upon, and was updated in 1997. However, it's still not enforced because it hasn't been ratified by many of the signatory countries. Israel is a signatory. I believe that Egypt and Jordan are as well. But I think Egypt is the only country that has ratified the convention in their legislation. Israel, Jordan and the Palestinian Authority

have not. We can also look into other international standards, for example, the international phytosanitary measures that were accepted in 1999.

Israel, Egypt, Jordan and Palestine do not comprise a working group in the International Plant Protection Convention. There are regional working groups in Asia, the Pacific, the Caribbean, Central America, the European Union, and the Mediterranean. Israel is a member of the European Union and the Mediterranean working groups. Egypt is a member of the Africa Regional Group. But as four countries living side by side, we could also decide to create a sub-regional working group within the International Plant Protection Convention. This is something we might want to think about.

There are many international and regional organizations working on plant protection. This is not a new subject. It is an area characterized by a great deal of international cooperation. Each of our four countries participates in some of these organizations. Our goal is to see how we can form a regional working group that will upgrade the effectiveness of our standards and our ability to use them to increase our export possibilities. To further these aims, we might consider a variety of additional ways to participate, or otherwise use these organizations as resources.

For example, the International Society for Plant Pathology is an international organization founded in 1968, a member of the International Union of Biological Sciences. They sponsor the International Congress on Plant Pathology. I think representatives of all four of the countries here attend the conferences of the International Society of Plant Pathology.

The International Association for Plant Protection Sciences was formally inaugurated at the International Plant Protection Congress in Jerusalem on July 28, 1999. Their vision is the economically efficient production of healthy crops, and a healthy environment for the benefit of all. This is a membership organization and we could become members either as individual countries, as scientific experts and associations, or as country members in a regional working group.

There is the European Crop Protection Association, quite a large organization. We are all part of the Barcelona process of the European Union that entitles us to membership in European associations.

Another European association is EPPO, the European and Mediterranean Plant Protection Organization. This again organizes all the countries of the European Union in the Mediterranean basin dealing with standards for the Mediterranean region and plant quarantines. They provide publications and technical services to member states' organizations.

There is also the Mediterranean Phytopathological Union, another professional working group for Mediterranean countries, which deals with all the issues involved in plant protection and phytosanitation.

I also brought materials put out by the European Union on the current situation and future prospects of the European Union Crop Protection Agency. This provides an assessment of the policies within the European Union today with regard to plant protection. There are also official European documents issued by the European Union on registering crop protection products in the European Union.

There are also, in the European Union (EU), quite extensive policy papers on the procedures for approval of crop protection products within the EU. They are very detailed. All the standards are available for your review. These are some of the guides we can use to advance cooperation in our region.

Lastly, and perhaps most important, is the International Plant Protection Convention. This perhaps can serve us as a guide. If we were all able to adopt the technical standards of the International Plant Protection Convention, it would make it easier for us to cooperate with each other. These standards, I assume, would be accepted as a benchmark, a guideline for inter-regional import and export of agricultural products, and would enable us to deal much more effectively on the international level as a regional export market.

**Ali A. El-Saied (Egypt):** The topic of this presentation is the issue of quality fruit and vegetable trade, and how regional cooperation could help in penetrating the major markets of Europe and the Gulf and others.

If you take a closer look at the map that represents the trade of fresh produce worldwide, you will see that we have five major markets for fresh produce worldwide. The NAFTA market -- the United States, Canada, and Mexico -- is comprised of 375 million consumers. But to a large extent it is a self-supplied area. A more important market for us are the Western European countries, with 450

million consumers, limited production during the winter season, very high GDP per capita, a health food trend, and a big demand for fresh produce year-round. There is also a very big market in Eastern Europe and the former Soviet Union, and another very important market in the Pacific region -- Japan, Hong Kong, Singapore and so on. Finally there is the market that is made of the countries represented here.

This map clearly indicates that our four countries are very close to the largest and most important worldwide fresh produce market -- that of Western Europe. We have proximity to the market and favorable weather conditions for producing fresh produce year-round in open fields. So we have many advantages. We are not competing against each other in this market. In fact, we are competing against other food suppliers such as India and China, and off-season suppliers such as Chile, South Africa, and Australia.

Data available illustrate the idea of regional cooperation. For example, it shows the major mango producers. We are not competing against each other in the mango market, but rather against Central American and Asian countries, and also some Central African countries.

To understand the market, and to understand the potential for cooperation, we need a mechanism -- a methodology -- to evaluate our market position, our profitable demand size, our market size and the market trends. For this analysis, we need to focus in four major areas: a methodology to measure the potential market size, potential profitability, our competitive position, and our regional export potential.

Each of those four major criteria includes sub-criteria. To measure potential market size you have to look for production in the target markets. You have to study the capability of the market to supply its consumers with fresh produce. You have to look for production trends, consumption trends, import trends, and so on. You have to measure your profitable demand market size.

There is a simple way to measure market trends as a first step in identifying your markets. You have to look for production trends, export and import trends, processing trends, and total availability of fresh produce in the target market. You also have to look at seasonal supply patterns in order to identify your seasonal position and when you could profitably send your product to this specific market.

Look for example at citrus imports into Europe. There are some seasonal suppliers. In the gaps between those major suppliers, we could act as a niche market supplier to meet market demands during those specific periods of time.

There is a simple methodology to estimate market size. It's very simple to compare CIF delivery cost against wholesale market price in order to determine, to some extent, when you could profitably supply this market. The most difficult thing is to measure the market size. How much can you produce or deliver to this market without forcing wholesale market prices down?

The idea is very simple. As market supply goes up, prices go down. At some point in time, the wholesale market price will equal your CIF delivery cost, and you can measure how much product the specific market absorbs at this time. Knowing the number of weeks these wholesale market prices will be up over your CIF delivery costs, you can multiply the quantities supplied to the market and thereby measure your market size.

A computer program is needed because the calculations occur in three dimensions: CIF delivery costs, wholesale market prices, and the quantities supplied to the market coming from local production or from export. These three factors are calculated in terms of each other. We have developed a computer program that easily calculates those factors for any market, for any product, with accurate and timely information.

Utilizing these criteria, you can identify not only your market windows, but also how big they are at a specific time. A simple example, the table grape market in Germany. If you look at the total supplies of table grapes to the German market in 1990 Eurostat -- you will see that there are two major sets of suppliers. One set supplies the German market with grapes in winter, during the off-season: Chile, South Africa, Australia, India, and Pakistan. On-season grapes come mostly from Italy and Spain, the second set of suppliers. But in between there is a window, from late April until late July, where we could profitably supply the market with grapes.

How big is the grape market in Germany? Utilizing these criteria, we come up with an estimate that 140,000 metric tons of grapes could be profitably shipped to the German market during this market window of 12 to 15 weeks. No single country in

the region could efficiently supply the German market with these huge amounts of grapes during this period. It requires a great deal of cooperation between our countries to penetrate the German market -- and other European markets -- with grapes at this specific period of time. It also requires a lot of technology and a lot of effort to get grapes earlier to fit this specific market window.

There is another market window in the late season here, before the Chilean and South African season. And Christmas time is also a profitable market for grapes in Germany. In this way you can measure your market, market windows, competition and so on.

Also very critical, this computer program can produce a chart very rapidly. The chart shows CIF delivery cost, monthly CIF, profitable demand volume on a monthly basis, peak volume and total consumption of the country, and can identify exactly how much you can supply the market with this specific commodity.

You also have to identify from which direction the competition is coming. This software can develop charts to show you, during your market window, who is competing against you in the marketplace so you can see your advantages and disadvantages as compared to other market suppliers.

What most people are interested in is comparing price against CIF delivery cost. Available information shows the three-year average of wholesale market prices of strawberries in the German market, and the CIF delivery cost in Egypt. The market window will be mostly during November, December, January, and February -- during Christmas time -- when there is lack of supply in the marketplace. So this is a simple way to identify the timing of your market window. You have to see what your competition looks like and when it is profitable to export to this market.

It is also important to come up with a seasonal index. We have prepared details of grape prices in Germany. There is a period when the price is going up because of a lack of supplies in the marketplace, and this fits the market window that the computer calculated. So you benefit from low competition, high prices and huge market demand at the specific period of time which is your market window.

The European Union is the most important fresh produce market worldwide. First of all, we are talking about 450 million consumers in 15 countries. More

importantly, in the fresh produce business there is a trend that began a few years  
fresh  
produce, fresh vegetables and fresh fruits, and fewer processed products. This is

These consumers are looking for year-round supply. As we all know, there is a seasonal pattern for supply of fruits and vegetables. Now, consumers, following the chain stores and the concentration on demand level, want grapes year-round. They want strawberries year-round. These cannot be supplied from local production, so they depend on imports to supply the market during these periods of time, which in turn creates more demand for fresh products.

Bad weather conditions in the European Union during the winter season make the production of fresh fruits and vegetables very costly, so they have to look for another supplier to supply the market with fresh produce, especially during winter season. In our region, we can produce those fruits and vegetables in the open field at very low cost.

EU consumers are rich and sophisticated. Their per capita GDP is, on average, \$15,000 per year, which is very high compared to most of the countries in our region. And as you know, the demand for fresh products is highly elastic. Therefore, increasing income and increasing per capita GDP will create more and more demand for fresh produce.

This leads us to the simple conclusion that we are facing a situation in which health trends are creating more demand in Europe for year-round supply. This in an area which has a high real GDP. There will be increasing demand for fresh fruits and vegetables. On the other hand, there is limited local production -- especially in the winter season -- due to bad weather conditions, as well as shortages of labor at harvest that makes their wholesale market prices high. Those two factors lead to increasing imports to satisfy the increasing demand and to overcome the limitations of local supply. This will open an excellent opportunity for us as a region to export to the European Union.

If you look at import trends for vegetables in Europe from 1990 to 1999 you will see that the import of fresh fruits and vegetables, from outside Europe especially, has been booming. There is also an increase in importing fruits from outside the European Union, and as a result, an increasing demand.

Take, for example, EU import of strawberries between 1990 and 1999. Four major countries -- Germany, The Netherlands, France, and the United Kingdom -- imported, in 1990, approximately 200,000 metric tons of strawberries. In 1998-1999, their imports jumped to more than 270,000 metric tons, mostly from Spain and France, but also including ever-increasing imports from non-European suppliers such as Israel, Jordan, Morocco, Turkey and so on.

The mango is a very interesting product. A few years ago, mangoes were considered exotic -- meaning, in marketing, a minor item, not like bananas or citrus

become familiar with it, and have adapted to consuming.

An important issue here is that the capability of European countries to produce mangos is very limited. There are very few mango plantations in Spain, and all other mangoes are imported into Europe from outside the continent. They depend heavily on Mexico and Central America to satisfy their increasing need.

These consumers, who are not so familiar with mangoes, believe in identifying the ripeness of the mango by its color. In Egypt, Israel, Jordan and Palestine we produce green mangoes, and the European consumers believe they are not ripe. Therefore, we need to educate them. We need to promote our mangoes and penetrate those markets heavily, because it makes no sense that Mexico and Brazil, who are so far away from the European market, can profitably ship their mangoes there and we cannot. This is very important.

In Egypt, for example, we produce about half a million metric tons of mangoes each year, and export less than 1,000 metric tons, while in Mexico they're producing 90,000 metric tons and exporting 80,000 metric tons of mangoes every year. So this could be an area where we could cooperate successfully.

The table grape is another interesting product. The Europeans like seedless table grapes. In 1990, they imported about 450,000 metric tons. This information comes from official Eurostat databases. In 1997-1998, their imports jumped to 1 million tons of table grapes every year into the 15 European Union member countries. Applying this methodology of profitable demand analysis, it is very clear that we have an excellent market window in Europe during the winter period.

and January, there is no competition and very high prices, so there is an excellent market window during that period for strawberries in Germany.

There is also an excellent market window for table grapes in Germany during May, June and July. Our problem in Egypt is that we mostly grow Thompson seedless grapes, a variety available in the marketplace, but a late variety. We need some technology to enable us to get the grapes earlier, in late April or May. I know the Israelis have the technology to produce grapes successfully in April. We need some sort of technology transfer or some help in adapting -- through acid treatments, through protecting grapes using plastic sheets. There is a lot of technology, and a technology transfer would help us in this specific area.

So there is a big, very profitable, fresh produce market in Europe. Through cooperation among our four countries, we could penetrate and become a force in this marketplace. On the other hand, the EU adheres to a very rigid agricultural policy, the General Agreement on Tariffs and Trade (GATT). In addition to the GATT, they developed something called the entry price system. This applies to 15 commodities, most of which are produced and exported from our region. One product on which an entry price is imposed is grapes. This is another protection measure. As a result if you want to ship grapes to the European Union after July 21, your CIF delivery cost should not be below 55 ECUs per 100 kilogram. This means that your price will be much higher than grapes coming from Europe. This is another method of protection that affects our grape exports very severely.

There are two things to be done. We can negotiate with the Europeans to lower those entry prices, or just to eliminate them. The other option is to develop an efficient post-harvest policy that will enable us to ship grapes by sea rather than by air. That means the CIF delivery costs will be much lower, even after adding tariffs and entry prices. So we also need to cooperate in this area of post-harvest handling, to enable us to ship our products in general by sea rather than by air. Instead of giving our profits to the air companies, we could develop an efficient sea transport system.

Here is another example. In the Sinai we are producing 80,000 metric tons of peaches every year. We can't ship them to Europe during our market window (three or four weeks in May and June), because the Europeans impose entry

prices that prevent our peaches -- and stone fruits in general, including apricots and nectarines -- from entering the European Union. We need technology to enable us to get peaches and apricots and other stone fruits earlier in order to avoid this problem. We need to develop an efficient transport system and to negotiate with the European Union to lower those entry prices, or eliminate them.

Satisfying needs for quality in the marketplace also requires a great deal of cooperation among our four countries. Quality is very important in the European marketplace. It is a key to penetrating the European Union. Among highly sophisticated consumers, quality is the most important factor in the purchase decision-making process. The European Union used to market fresh fruits and produce through the greengrocers. But more and more, chain stores and supermarkets are dominating the fresh produce business in Europe, as well as in the States and in other advanced countries.

That means that very few suppliers control the market. In England, for example, six major chain stores determine what the English citizens will eat this week -- Marks and Spencer, Safeway and so on. The latest report on fresh produce consumption in England reveals that the 20 largest retailers control the fresh produce trade in Europe. And this number is becoming smaller and smaller. Now it's 40 large organizations. Within the next few years there will be 20 large-scale producers. That means those people need to deal with fewer growers.

The critical issue for retailers is not the quality of a product *per se*, but, rather, consistent quality. The suppliers must keep sending high quality products to their European market. The market also demands supply throughout the whole year. If you look at the minor regional climate differences among our four countries, you can see that, through integration, we could expand our supply period, and penetrate the market for longer periods of time. Hence we could answer the demands of the chain stores in Europe.

In their efforts to deal with as few suppliers as possible, chains also look for those who can supply the market with larger quantities of produce. To summarize, the chains need a supplier who can supply the market with consistent quality over a longer period of time.

In order to succeed, a joint project will have to create a good reputation. From my experience of working with European importers for many years, I know that Israeli

products enjoy an excellent reputation. Agrexco Carmel is an example of an Israeli organization that has excellent representation in the marketplace. By working jointly with Israel we could all benefit from the reputation they have established.

Wholesale market prices differ greatly due to many variables: seasonal, supply-demand effect, variety effect, and supplier. There are large fluctuations in price for the same fresh produce coming from different sources, depending on quality. Look for example at average prices in Germany in 1999 of grapes coming from different sources -- Israel, India, South Africa, and Egypt. For the same variety, sold in the same market, there are big differences in price. This reflects the differences in quality between the different suppliers.

Israel has a good reputation in the market, a good quality product. There are also seasonal differences such as high prices during the winter season.

To summarize, taking the simplest statistical analysis, just the average and the variance or range in prices, you'll see that prices vary greatly accounting to the quality of the product supplied. Using statistics intelligently, the average and variance of your place in the marketplace can be measured.

What do we lose if we don't focus on quality? A simple example is how much Egypt lost due to low quality in the strawberry marketplace in England this year. This graph shows the major suppliers, the average prices, and Egypt's average wholesale market price. The difference between the Egyptian price and the average market price is like this, multiplied by the quantity supplied to those major markets. Egypt suffered severe losses because we did not meet the standards required in the marketplace, and therefore got prices lower than the average wholesale market price.

So investment in post-harvest is not a cost as many people think. It's an investment, and the return can be easily measured.

Besides the European market, there are also huge, profitable markets in the Far East and in Eastern Europe. Those markets have some advantages and disadvantages, but jointly we could penetrate those markets with very high-quality produce year-round.

very important. There is substantial expected growth in the horticultural sector, which is not only a source of income, but also a source of employment. We have 63 million inhabitants, and we need to find jobs for them. There is optimism about the future of the horticulture sector.

As you know, we had a rigid agricultural policy during the 1960's and 1970's, focusing mainly on Eastern Europe and the former Soviet Union. Quality was not the priority; price was the most important factor. Political instability in those traditional markets reduced our exports dramatically. In the wake of these changes, we are unable to find another market because, in Europe, quality is the first priority. Therefore, we have to redefine our ways of thinking, our production systems, and our post-harvest systems to fit the needs of those markets.

Now, the Egyptian Ministry of Agriculture is applying an open-door policy, and is trying to adapt to the globalization trend. The government of Egypt has eliminated many barriers caused by centralized planning. Immediately after the elimination of those barriers, the producers started investing.

For example, the production of fruit in Egypt from 1998 to 1999 is booming. Our major products actually concentrate on new land areas, on the desert. I know that the Israelis have had a lot of success in turning yellow sand into green. We can benefit from their experience. There is already some cooperation occurring on a private basis with regard to cultivating the desert.

We also have very big national projects for cultivating more and more desert land in upper Egypt and in the Sinai and so on. We expect to add to our agricultural area close to 4.5 million fedans. In order to be able to cover investment costs in these very big projects -- and we are talking about 3 million fedans by the year 2010 -- traditional crops, such as wheat, cannot be grown. There will have to be a focus on high-value horticultural crops -- cut flowers, different kinds of herbs, organic or non-organic. Most of those areas will produce huge quantities of fruits and vegetables every year.

If this trend continues, we expect to grow around 60 million tons of fruit annually. The Egyptian market cannot absorb 60 million tons of fruit every year. However, except potatoes and dry onions, we export less than one percent of nearly all products, and most of those products have an export rate of zero percent. If we

do not succeed in exporting the surplus, we will kill the local market prices. So we have to find a way to enhance exports.

In Egypt, we believe that we are doing our best to find the right track. If you look at our export structure, you will see that we are focusing mainly on specific markets and specific products. For example, potatoes make up about 55 percent of our total fresh and processed fruits and vegetables. Our major markets for potatoes are the United Kingdom and Germany. So we are focusing on two markets and one product that generates 55 percent of our total export revenue. If something happens to potatoes, we have no alternatives, and the impact will be very dangerous to our economy. Therefore, we have to diversify our exports one way or another to cover more markets and more products.

If you look at total Egyptian exports of fresh and processed fruits and vegetables in 1999 to major destinations you will see that if we eliminate Germany, Saudi Arabia and the Ukraine, we will be in trouble. If you look at German imports from Egypt, 65 percent are dried onions and 30 percent are potatoes -- two major items. If you eliminate those two major items of Egyptian export to Germany, it becomes a minor market.

Right now we are focusing mainly on the Gulf Cooperation Council (GCC) markets as a back up, a second market for our products. But it's a minor, small market. Prices fluctuate very rapidly, and this is not good in marketing; it is important to have a stable market. Those people are rich. They consume significant quantities. But we are talking about 19 million consumers compared to 450 million consumers in Europe. Their quality and standards requirements do not match those of the European Union, so if we keep focusing on regional markets like the GCC countries, Egypt will soon be in trouble. We have to focus more on the huge markets.

What are the potential areas of cooperation? One important thing that enables fruit and vegetable growers and exporters to compete more effectively in the marketplace is market information. They need a market intelligence system to monitor those markets, analyze the information, and disseminate it efficiently to the industry so informed, rather than haphazard, decisions can be made.

In most cases in Egypt, the producers start from the farm, not from the marketplace. They produce something and then start looking around for a purchaser. This is

not the right way to market your produce. You have to start from the marketplace, study consumer needs and market trends, take an informed decision to produce something, and then follow the chain to supply the market with this product, at the proper time and in the proper shape. Therefore, information plays a critical role in all parts of the production, post-harvest and handling chain. You need market, transport, production, and post-harvest information.

In Egypt, we are trying to set up a system that will regularly collect timely, accurate, immediate market information and disseminate it efficiently to our growers. We are still in the beginning stages, but we believe that if we could succeed in setting up a system like this for the region, it could be very profitable. It would be an important factor in pushing our fresh produce industry into becoming a vital force in the international marketplace.

Another area of cooperation could be technology transfer in production, post-harvest and shipping. If we were able, for example, to ship strawberries by sea -- in vinyl containers or in some other kind of modified atmosphere -- we could ship 250,000 metric tons to Europe every year. We could beat out Spain during the Spanish season because we have available land, available water, and available weather conditions. We could also supply the market with much cheaper strawberries between the Spanish seasons. But this requires some sort of cooperation in technology transfer.

This is actually happening right now. Israeli companies are supplying the Egyptian market with different types of hybrid seeds, irrigation systems, drippers and so on. But this needs some enhancement. We need formal procedures, rather than just scattered efforts to bring those types of technologies to Egypt.

In Egypt, we have land and we have labor. We need more sophisticated technology. We need more investments that could come from Jordan or wherever, and this could create an integrated fresh produce sector that could strongly penetrate the marketplace.

Another area of cooperation could be economic and marketing studies. These studies would help people understand the mechanisms of this industry, and enable them to make good and informed decisions. There were two studies made on the export opportunities of grapes and mangoes to Europe. These were presented to

the International Conference of Computer Science last week. They proved very clearly that we have a very big potential market for those products.

We also regularly publish articles in magazines and newspapers on various aspects of marketing. There is a lot of analysis here about export markets, what we have, what we need, and other related issues. We also develop guidelines to enable people to understand the mechanisms and marketing issues in Europe.

One of the major areas of cooperation could be identifying for investors the benefits of working with us. If you talk business, you talk money and profits. That is the only language investors understand. They want a business plan for growing strawberries for export that identifies precisely every technical and financial aspect associated with this specific project. If there are joint efforts to produce strawberries for export, they want to know what it will cost them as individual investors, what benefits they can reap, and then, in addition, how the countries can profit. This is the language that investors understand. Developing these kinds of studies for various crops and markets would be attract investors to this sector, and push the financial authorities to finance these important activities.

Another type of study -- in the area of quality standards and phytosanitary and so on -- was recently conducted on growing and exporting strawberries and grapes from Gaza. This is an example of how we are focusing regionally from the beginning.

mango. We study every single detail in the mango sector from the technical, post-harvest, financial and marketing points of view: identify our problems and how we can solve them; develop a strategy to increase our exports; and translate this strategy into an action plan. The action plan includes specific tactics, the time period, who will do what, who will supervise, and who will make sure all these things are actually taking place. This is strategic planning. It is a very useful tool that could help you achieve your goals.

**Hillel Adiri:** The title of th

The policy of applying standards to each product is a fundamental for creating products and materials with uniform properties. The standards usually increase

product quality, and thus demand and profits increase as well. Standards also protect customers who select products with a standard label, thus obliging the producer to ensure a certain level of quality. Initially, standards are voluntary. However, standards may become compulsory in cases where the public interest is involved, or as a means to improving the efficiency of the economy.

Establishing uniformity of standards among nations, rather than within a nation, results in consistent definitions and scales that enable products to be shipped freely from one country to another. As government representatives, it is our responsibility to create standards that serve the producer-farmer in providing to the markets. Uniformity of standards among our neighboring countries is also logical considering the number of diseases and pests common to each of us. Country-specific preventive measures are not effective unless they are part of a united effort in which all the neighboring countries participate.

The process of creating uniform standards must be taken in stages. The first stage might be mutual agreement on work methods. Examples of other stages are the following: a) compiling a database of diseases and pests that exist in each country, b) technology transfer (i.e. transfer of treatment methods) c) lists and databases of pesticides, etc. A more advanced stage involves the recognition of the existing agricultural standards in each participating country and how best to harmonize them.

Another type of standard to take into account is the standards of countries importing from us. For example, countries in the EU dictate their demands as preconditions for buying our products. They have established standards such as ISO 9000, with more to come, and we have to accept these strict quality standards as our standards.

These standard-related issues will have to be studied in professional groups. The knowledge accumulated by each of the participants must be shared in order to attain the high standards needed for export.

**Saamer Titi (Palestine):** My presentation will discuss the aspects of Palestinian agriculture relevant to participation in regional cooperation.

The Palestinian Authority inherited damaged infrastructure, weak support services -- extension, research stations, marketing and veterinary services -- and a lack of agricultural laboratories.

The Ministry of Agriculture has also faced many constraints and difficulties related to natural resources and the environment. Some of the major constraints and difficulties are the following:

- ? limited water and agricultural land (made worse by increasing competition from other sectors);
- ? soil erosion and deterioration of soil quality and productivity;
- ? excessive use of chemicals (particularly pesticides);
- ? deterioration of the quality of water used for irrigation;
- ? deterioration of plant cover and plant and animal wildlife habitats; and,
- ? urban expansion and encroachment on agricultural lands.

A major technical difficulty and constraint is the weak infrastructure for agricultural research. Experimental stations are not adequately equipped. There is a severe shortage of laboratories, equipment and required backup systems, and a lack of trained researchers to cover the major agricultural fields.

Other important technical difficulties include a poor infrastructure for the agricultural marketing sector; weak agricultural and food manufacturing activities; and lack of, or confusing, data and information on agriculture.

We also have problems of a socio-economic nature, such as:

- ? the small size and fragmentation of agricultural holdings and joint (common) ownership, which reduce production efficiency;
- ? low returns and high risk in agriculture that has led many to abandon the sector, and sharply reduced investments;
- ? an inadequate agricultural and rural finance system; and,
- ? absence of effective collective and cooperative work.

Difficulties and constraints concerning institutions and legislation include: inappropriate agricultural laws and regulations; the lack of an agricultural insurance system and compensation to farmers for natural disasters; and, contradiction and duplication between institutions dealing with agriculture..

We must not forget the barriers related to the licensing of transporting commodities between the southern and northern governorates on the one hand, and between Palestine and the external world on the other. The restrictions imposed on foreign trade have led to an increase in the costs of agricultural production and marketing, and low domestic prices.

The Ministry of Agriculture has worked hard -- dealing with many crucial problems and issues -- in order to rehabilitate this important sector. They have issued the Palestinian Agricultural Policy and its accompanying strategies, and are now developing the Medium-Term Plan for the years 2001-2005.

The main objective of the agricultural policy is to encourage regional and cooperation, specifically through integration in, and effective contribution to, regional and international organizations.

The technical agricultural policy envisages support for agricultural marketing, trade and processing through the provision of organizational and infrastructure services. These services include:

- ? establishing laboratories for the assurance of quality and agricultural and veterinary quarantine;
- ? adopting standards and specifications for agricultural production;
- ? enacting necessary legislation in accordance with regional and international law;
- ? organizing and monitoring the wholesale markets, central markets and the border controls;
- ? providing storage, cooling, cool transportation, grading and packaging services;
- ? establishing a data and marketing services system.

The Ministry of Agriculture is now implementing about 30 projects in different programs. One of these is the pesticide control program financed by the Spanish government, which is aimed at the establishment of pesticide quality-control laboratories; a pesticide registration unit; and a local information network between the related ministries and societies.

In addition, the Ministry of Agriculture is close to signing an agreement with the Italian government to finance a project for phytosanitary services with the following objectives:

- ? to assess the phytosanitary services for crop-disease monitoring and control in Palestine;
- ? to enact legislation and technical measures to regulate the use of chemicals, quarantine, and the production and use of certified plant propagation material;
- ? to establish a model fruit nursery to produce disease-free seedlings of grapes, citrus and stone fruits.

The Ministry has finished preparing the Agricultural Law and its by-laws, and has submitted it to the Legislative Council for approval.

In looking to the future, we can see that the Ministry of Agriculture will be able to control and supervise regulations regarding produce inspection and other marketing services. Establishing a quality control system to inspect agricultural products will lead to improvements in both the quality and the packaging of exported, as well as local, agricultural products.

Most countries have developed their own national standards aimed at providing the framework for internal and external trade. In Palestine, the relevant institutions are still in the early stages of developing national quality standards with regard to agricultural products. The Ministry of Agriculture of the Palestinian National Authority believes in regional inter-actions. The use of agreed-upon standards will provide an unambiguous description of the quality of agricultural products, and will assist in the formulation of a legally binding contract.

In the near future, the State of Palestine will be established, and permanent, relevant state regulations and laws controlling agricultural products should be available.

There are many important advantages to having standards that can be seen to protect consumer rights by setting limits on amounts of unsuitable or noxious materials. Standards also reveal clear variations in quality, and indicate opportunities for improvement and potential rewards.

The establishment of quality and graded standards for producers and users will benefit consumers by means of more stable prices and assured quality. The Palestinian National Authority continues to search, throughout the world, for assistance in developing an infrastructure for quality inspection services, in order to develop standardized grades and quality standards. This will serve both regional and international trade purposes, leading to the improved reputation of Palestinian products in neighboring and foreign markets. In other words, this will create conditions for favorable competition with products from other countries.

The establishment of standards can set the guidelines and rules for the purchase and sale of agricultural products. There has to be, in Palestine, an institutional framework for implementation. In this framework, marketing services would issue all the relevant phytosanitary certificates required by the countries importing the products, as evidence of official governmental control over the quality and suitability of the fruits and vegetables.

For the time being, what we need from within the Ministry of Agriculture in order to achieve our main goals with respect to quality control, are the following:

- ? the establishment of an institutional framework for quality services;
- ? branches or offices at different points -- packing houses, ports, airports and certain land points;
- ? a qualified and trained quality inspection staff;
- ? other necessary equipment that can provide information for inspection and for more effective advice for exporters and producers;
- ? certification that all exported agricultural products are free of disease, meet quality standards and all the commercial requirements of the importing countries;
- ? a quality control system to control and inspect all agricultural products intended for export.

We are still a new authority. Yet within five years we have been able to establish a base for the development and enhancement of our human resources. However, our experience is very meager compared to that of our neighboring countries.

We came here to deal with these issues. We came here in order to hear from you. We look forward to cooperation in agriculture, and in setting the standards for agricultural health, phytosanitary and quality, for all fresh fruits and vegetables.

**Mohid Ali Rahahela (Jordan):** First of all, my thanks to the organizers of this conference. I will discuss, shortly, the harmonization process of Jordanian agricultural standards with international standards.

The international economic environment has been changing in recent years. The opening of the market tended to necessitate the meeting of national standards with international ones, for both domestic and imported commodities. Jordan recently became a member of the World Trade Organization (WTO), and the Minister of Agriculture intends to implement an agricultural policy charter. This will lead to changes in some regulations in Jordan in the agricultural sector. We are now preparing a new law for agriculture in support of the Advisory Service to the Ministry of Agriculture, and regarding other regulations concerning the imports and outputs of all the agricultural activities in Jordan.

The Ministry of Agriculture, in cooperation with the Agricultural Marketing Organization and the Jordanian Standards Organization, are responsible for setting up the quality standards for fresh fruits and vegetables. The Agricultural Marketing Organization has taken the first steps towards setting up quality standards for fresh fruits and vegetables. The Agricultural Marketing Organization is also appealing to the Jordanian Institution for Standards to convene a committee from relevant public and private sectors to participate in discussing the proposal of a standard for a particular crop.

In Jordan, some existing standards must be amended in order to harmonize with international ones, especially necessary since Jordan has joined the WTO, and to respond to the new international environment. In order to implement these standards, the Jordanian Agricultural Marketing Organization issued and adopted rules for the regulation of:

? packing and packaging of fresh fruits and vegetables;

- ? production and handling of fresh fruits and vegetable;
- ? cold transport of fresh fruits and vegetables;
- ? cold storage of fresh fruits and vegetables;
- ? export warehouses for fresh fruits and vegetables.

Quality inspection is performed at border centers by qualified technical inspectors affiliated with the Agricultural Marketing Organization and the Ministry of Agriculture. Those people are responsible for examining all agricultural products imported into Jordan so as to ensure they meet the requirements of Jordanian standards.

In addition, we have a lot of regulations concerning plant quarantines and sanitary and phytosanitary aspects. Those regulations list the pests in Jordan, as part of an effort to prevent the entry of new pests. They are also aimed at preventing the entry of diseases into Jordan, and to allow only the entry of healthy plants and animals into the country.

In the new phase we will amend all regulations according to international standards and laws, especially plant protection agreements. This is what we have in Jordan, and we are now in the preparation stage for the new age of regulations.

**Dr. Gershon Baskin (IPCRI):** The floor is now open for comments and questions.

**An Egyptian participant:** I would like to know if the regulations of the different countries are available to each other. For instance, Jordan is taking about a new law. Do the Jordanians have the regulations of Israel, Egypt, and Palestine so they can take them into consideration? The aim is to harmonize. These are international regulations, so everybody should at least know what the other countries are doing on every subject.

**Ben-David Ran (Israel):** Our laws and regulations are open to everybody in terms of understanding how they work, our methods of activities and inspection, working in the labs, working with propagation materials, working with all kinds of things connected to our law and regulations. We are now in the first stages of developing an Internet site, where all this information will be open to available.

We are an ecosystem, so it is important that we all work openly and understand each other. And since every country has its own laws and standards, and since

the purpose of the standards is to enable commerce between us and to enable agricultural materials to cross our mutual borders, we must develop harmonized methods and arrangements. It is important that we be familiar with each country's requirements because they may be stricter in one place than in another. I think it has been agreed that we must adopt the strictest requirements because we want to improve and not go backwards to lower requirements.

**Dr. Gershon Baskin (IPCR):** The Israelis, as Ben-David said, intend to put the entire code of technical standards on the Israeli Ministry of Agriculture Plant Protection web site in the near future. The International Convention web site is very detailed and has all the standards, as does the European Union website. Anyone who wants to know the standards for entry of any crop into Europe can find those on the web sites.

The full code of European standards is available, so we are talking about modification of the local national standards. These should be the reference points. If they are not already available on the web, I am sure they will be, and certainly the Internet is the easiest way to share this information. It is no longer even necessary for everybody to have their own complete data base. Today you can link with a simple click on your mouse. The important thing is that we inform each other of where this information is available in the Internet so that we can all use it.

**Abraham Melamed (Israel):** I think we have to make a clear distinction between the technical standards of phytosanitary and hygiene which are simple standards -- and I imagine that each of our countries has rules and standards -- and quality standards, which are a whole different story. If I'm not mistaken, none of our countries has any quality standards in our local markets. In other words, when we export, we have to abide by the buyer's standards, but when it comes to our markets at home, we have no standards, neither Israel nor any other country in the region.

This is a difficult problem in the area, mainly for the producers. I suggest that we try, together, to encourage our governments and Ministries of Agriculture to overcome the difficulties and to establish a set of quality standards so our farmers won't have to work in two different systems. I think that this is the most difficult problem.

I am not saying that phytosanitary is unimportant. I am saying it's simple. For example, we are already cooperating with our neighbors with regard to the Mediterranean fly in the south. That sort of cooperation is simple. But when it comes to quality standards, this is the real difficulty.

**Ali A. El-Saied (Egypt):** Why do the four countries not have domestic quality standards?

**Abraham Melamed (Israel):** None of our local markets are truly competitive and transparent when dealing with relations between the produce and the wholesaler. The lack of standards serves, first of all, the wholesalers. So there is a very strong economic interest -- that probably affects the governments -- because when there are no standards, the wholesalers, the buyers from the producers, have a dominant position. When I see that something is not working well -- and this is from long years of experience -- I look for who is benefiting from the malfunctioning of the system. Clearly, in this regard, the beneficiaries are the wholesalers, and the losers are the producers on one side, and the consumers on the other.

**Dr. Gershon Baskin (IPCR):** A lot has to do with a lack of consumer knowledge and education. We held a conference a few months ago on Integrated Pest Management (IPM) cooperation between Israel and the Palestinian Authority. At lunch, one of the IPM people from the Israeli Ministry of Agriculture told me that, at home, he doesn't eat any leafy vegetables. He doesn't just wash all the vegetables he buys, but peels everything. And he won't touch strawberries and grapes. He is an expert from the Israeli Ministry of Agriculture who knows what's being served at his table, and in his home he doesn't eat any of that stuff.

The Israeli consumer, whom you might think is an educated consumer, apparently is not. The Israeli consumer buys whatever looks good in the market and does not ask about quality.

An interesting paradox -- Hillel Adiri once told me that the safest -- in terms of health quality -- fruits and vegetables available on the Israeli market are those coming in from Gaza because they are the only fresh produce checked box by box. There have been times when Israeli wholesalers have tried to poison the atmosphere in Israel against agriculture in Gaza, talking about irrigation with sewage water and things like that. But in fact, the fruits and vegetables coming from Gaza into Israel are the safest in the Israeli marketplace.

It is also interesting to note that, in terms of future negotiations in the region -- in particular, the negotiations between Israel and Palestine -- today, effectively, and mostly between the West Bank and Israel, there is no checking because we have a common customs envelope. But if, in the framework of the final status negotiations between Palestine and Israel, we enter into something less than a common customs envelope, and then we have common customs borders between Israel and Palestine, you can be sure that at those customs borders there will be plant protection services.

When there are customs borders and plant protection service borders -- between northern and southern West Bank and between Gaza and the West Bank and Israel -- the problems with moving goods that exist today are going to increase tenfold. This is also something to consider. This is a particular micro-problem between Israel and Palestine, but these borders also exist between Israel, Palestine, Jordan and Egypt today because we don't have common standards and we don't have common management of the laboratories, of checking and testing and enforcement. Therefore, our ability to market abroad together is also limited by our ability to market to each other. The amount of inter-regional trade in agriculture is very small.

**Mohid Ali Rahahela (Jordan):** These standards require facilities if they are to be implemented. We need facilities for testing and for implementation of standards, whatever the quality, as well as quarantine and sanitary standards. Facilities for implementation are as important as defining the standards themselves.

**Adnan Abdel Nour (Jordan):** I want to raise the crucial issue of pesticides. For instance, in Jordan and in the neighboring countries we do some residual tests on crops. We take samples from imported and exported produce. We also go to the central markets and do testing. The results are mostly acceptable, but still, we all know that there are problems arising from lack of information, know-how, techniques and facilities.

Another topic that should be discussed with regard to cooperation is the safe use of pesticides. As neighboring countries we are growing almost the same crops. We have almost the same environmental conditions. This means we can easily, through real cooperation, arrive at standards for the safety periods of each pesticide on each crop.

I am a member of the Pesticide Registration Committee at the Ministry, and when it comes to a new pesticide for a specific crop, we always engage in big arguments. It takes time to arrive at the right decision as to whether it is suitable for this kind of vegetable or not. We are seeking this kind of information. If the Israelis, based on actual research, have come up with safety periods or safe usage of pesticides, we would appreciate that information. We would greatly appreciate cooperation on this topic.

**Ben-David Ran (Israel):** In my car I have a few books listing all the pesticides and the information you were just referring to, and I will bring them in later. These pertain to conventional and organic agricultural products. And if this information is not yet on our web site, it will be very soon. Everybody will be able to go in and get it.

**Mohammad El-Hamalawi (Palestine):** There are many kinds of pesticides that are still in use and registered in Egypt and Israel and Gaza.

**Ben-David Ran (Israel):** This is another issue. We have to discuss harmonization of these matters.

With regard to phytosanitary control, it is actually not so simple. New insects penetrate the area, and even though you make great efforts to develop a new market -- let's say in the Far East, Japan, South Korea and so on -- a new insect can ruin it all. If this region does not get organized to do monitoring and pest surveys and harmonization of methods for dealing with new insects -- informing all the neighboring countries, treatment and eradication -- you can destroy all your efforts at developing new markets. This is very dangerous and there is a lot to be done in this regard.

Another issue is propagation material that will pass between the countries in the future. Let's say citrus fruit will be imported into Israel because prices are lower in neighboring countries. If you do not work in your laboratories -- for example, with pesticides -- using the same methodologies that other countries will recognize and accept in order to assure that your trees and propagation materials are clean from pests and so on, then trade between the countries will be hampered. Harmonization is essential.

Returning to quality. Even from one village in Israel, we may have to deal with about 12 to 14 kinds of products, six or seven fruits and six or seven vegetables, and we are now establishing new standards.

**Abraham Melamed (Israel):** And this committee has been working for nine years.

**Ben-David Ran (Israel):** No. This is something new.

**Abraham Melamed (Israel):** But for nine years a committee from the Ministry, together with the marketing boards, has been working on establishing standards. You can do it in three months if you want to because you have the examples of the Common Market in Europe and the USDA standards. You can just take those and adapt them to the conditions here. But this committee, which was headed by the Deputy General Manager of the Ministry, has been working for nine years, with no results. So my conclusion is that they didn't want to do it.

**Mohamed Abo Soliman (Egypt):** I hope we do not neglect the regional problem of water quality. We do not have sufficient fresh water. For example, in the near future, Israel will be using 40 percent treated waste for agricultural purposes. That means low-quality water will be used for irrigating the production. Therefore, we must have regional projects for defining standards for water quality in irrigation.

**Dr. Gershon Baskin (IPCR):** The Israeli newspaper, Ha'Aretz, reported this morning that an estimated 900 million cubic meters of water in the center coastal aquifer is polluted. These are fresh water sources that have been polluted by industry in Israel. The World Health Organization standards are supposed to be used by countries today.

**Ali A. El-Saied (Egypt):** It is not a matter of setting standards. It is a matter of how to apply those standards. There is something wrong with the marketing structure, the channels that deal with wholesalers, which prevents the application of those standards. The marketing system in general has to be improved in order to focus on developing standards.

**Mustafa Saima (Palestine):** We have to define quality. What does quality mean? Is it length, width, color, shape? Quality is what the consumer needs, and

the consumer needs the produce to be free of disease and of a certain shape, color and taste, and price.

**Mohammad El-Hamalawi (Palestine):** And free from pesticide residues.

**Mustafa Salma (Palestine):** We can't separate the quality standards of length, color and shape from pesticides and pests and disease. These all come together under the umbrella of quality standards.

**Hillel Adiri (Israel):** As a farmer, I believe in voluntary organizations of quality control because the farmers should be involved. In Germany, there is an organization of farmers for quality control because, according to the European Union system, there are no taxes and so on. The farmers have a brand name and they announce what pesticides they use or don't use, or of which they use less.

I believe it will be very difficult to get all the governments to agree to standards. In Israel we do not yet have a local standard. There's a long way to go. So if we can learn from the German example, a farmers' organization -- with very little money and with assistance from the government and other organizations -- can establish a farmers' brand name. And farmers who are members of these organizations are very happy because the consumers in the supermarkets look for this farmers' stamp as an indication of products which are clean of pesticides and so on.

About water -- again, as a farmer -- I prefer using recycled water, only from an economic point of view. On my farm I can use fresh water and recycled water, but the citrus plantation that I irrigate with fresh water loses money and I have to stop it. The plantation I irrigate with recycled water makes money. I invite you to come and see it. I have been irrigating citrus and persimmons for 20 years with recycled water, and we are very happy with it. It does not affect the fruit and the cost of water is cheaper. In Israel, the average now is about a shekel for a cubic meter of fresh agricultural water, and for recycled water we pay 20 or 25 agorot. This is a saving of 75 percent. We also save on a lot of chemicals because they are already in the water.

These days we even have drip irrigation with very modern filters that result in very clean water. First the water is cleaned in the plant. But when we get it

through the pipes in the field, in a unit of 100 or 200 dunams, we also have a big filter that cleans the water so you can use drip irrigation. So I don't see a problem with irrigating with recycled water. This is the way to do it.

**Mohammad El-Hamalawi (Palestine):** Do you get the same prices from the consumer for fruits irrigated with recycled water?

**Hillel Adiri (Israel):** Yes. It does not affect the fruit.

**Mohammad El-Hamalawi (Palestine):** But there is the psychological aspect.

**Dr. Gershon Baskin (IPCR):** I'd like to make a comment about the first thing you said, Hillel (Adiri). It is perhaps more difficult for us to talk about standards for the local agricultural market than for cooperation with regard to standards and quality and phytosanitary for our export markets.

For example, you told me you also witnessed in Germany the unloading of a cargo of strawberries. They were all grown in Gaza, but Carmel packaged one shipment in new modern packaging, and another shipment of the same strawberries was packaged in old packaging that the Palestinian Authority bought. The price differential -- for the same strawberries -- was 40 percent. The Israeli product got 40 percent more just because of the quality of the packaging. This is an example of where the unification and harmonization of quality standards will respond to the need to penetrate the wholesale buyers in the European market.

**Hillel Adiri (Israel):** Sometimes you save a penny on the packaging and you lose a dollar at the other end. This is what happened.

**Caro:** This was also the experience in Europe. About 15 years ago, Dutch cucumbers were always getting 3, 4, 5 guilders more per box than the Spanish cucumbers of the same variety. The quality standard exists for export. The difficulty will be to apply that standard to the local market. In Spain, a few years ago, the good quality produce was sent to Europe, and for the local market we had to use second- and third-quality products in bulk, not in boxes.

Today, if you buy tomatoes, you know the country of origin and you can decide if you're willing to pay more for a tomato coming from Paraguay than from some region in Spain. You know this is first quality and this is second quality. The main

problem is the willingness of the consumer to pay a higher price for a better product.

Once everybody regarded tomatoes as one product. Now there are 20 different tomatoes you can buy coming from many different places. Spanish tomatoes come from three, four, five different regions; and if you want, you can buy Dutch tomatoes in Spain in the supermarkets. They might cost a dollar per box more than the Spanish tomatoes, but if you want to, you can buy Dutch tomatoes.

You can identify what you are buying. You can decide. It's not a matter of quality standards for the local market. It's the willingness to apply that standard that exists in the local market, and that depends on the consumer's willingness to pay a higher price for a better product.

**Benjamin Raccach (Israel):** I totally agree with you. We have to move forward, not only to simple things such as the amount of insecticides or the packaging, but also to taste and color. Consumers are becoming more aware of what they want, and if we don't establish standards now for the future, we will be left behind with the standards of the past. We are now competing all over the world, and people are becoming more and more aware of quality. And not only quality that you see with your eyes, but also taste. A tomato that tastes like a cucumber is not a tomato. A cucumber that tastes like squash is not a cucumber. We have to look to improving taste in addition to all the other parameters mentioned here.

In this region, since we are working in the same climate, on the same land, with more or less the same variety specific to this region. We have to think about things we can sell during the wintertime in Europe, but things they would like.

I totally agree that we have to reduce pesticides and keep standards. Unfortunately, when I go to the market, I see insecticide residues that you never see on produce sold to the export market. For exports, you wouldn't dare to put this quality of produce on the market. But what is sold inside, directly from the grower, is sold with insecticide residue. Not everybody knows about washing produce and so on, and our population is suffering. So we have to maintain standards of the same quality for export as well as for internal consumption.

Finally, about water - we have to remember that there is a difference between using recycled water on a tree that produces fruit, and using recycled water on leafy vegetables, such as celery or lettuce and so on. Recycled water should be diverted to crops that are recycled in the plant and you just eat the fruit eventually.

**Saamer Titi (Palestine):** What about root vegetables? Are they the same as leafy plants?

**Mustafa Salma (Palestine):** And some fruits are made up of a high percentage of water, like watermelons and strawberries.

**Benjamin Raccah (Israel):** Root vegetables have the same problem. Carrots, potatoes and radishes are growing in the water with their organisms, so you have to be careful with those unless the quality of recycling reaches a level that is as pure as fresh water.

**Ali A. El-Saied (Egypt):** It appears that we are talking about something that is not quite as simple as we believed. You have quality in terms of eating, quality in terms of appearance, safety... -- which is a very important item. In Europe they are now developing Good Agricultural Practices -- GAP -- and quality standards are just a part of this. We are going to have to expand our efforts to understand this GAP system and how to apply it because, as of September 2001, every country targeting the European market will require a GAP certificate, starting from selecting the right seeds to managing your crop and everything in between.

GAP relates to the quality of the produce, not the management of the systems. Water quality, environmental issues, child labor abuse -- a critical item -- all these fall under the umbrella of this GAP system. We have to look into how this works and how we can use it as a main frame in our efforts to develop quality standards.

### Guest Speaker

**Dr. Gershon Baskin (IPCRI):** We are beginning the afternoon session with a presentation by Dr. Johannes Gerster, the director of the Konrad Adenauer Foundation in Jerusalem, responsible for activities in Israel. Under his leadership, the Adenauer Foundation has supported institutions, programs and projects that encourage peace in the region, with a very strong emphasis on activities between Israel and Palestine.

Dr. Gerster was a member of the German Bundestag for 25 years, and served as head of both the Security Committee and the Budget Committee, a very well known politician in Germany. Since his retirement from politics, he has been directing the Konrad Adenauer Foundation here in Jerusalem. Our three previous conferences on agricultural cooperation in the region were in partnership between IPCRI and the Konrad Adenauer Foundation, and we were very pleased to accept Dr. Gerster's request to come speak to the forum.

At our last conference in Taba, it was Dr. Gerster who proposed that we begin to develop a common agricultural policy similar to that existing in Europe. He has also made a commitment to bring in European consultants to the region to work with us for an on-going period of time so we can implement recommendations taken by this conference and other conferences among the four Ministries of Agriculture.

Dr. Gerster's presentation today will be about European common agricultural policy and the lessons we in this region can learn from that European experience.

**Dr. Johannes Gerster (Germany):** We cannot compare Europe with the Middle East, but we can still learn from each other, as we in Europe have learned a great deal from Middle Eastern culture, be it in the field of religion or otherwise. This can also hold true in the area of policies and politics.

I would like to explain how the European Union was set up after the Second World War, what instruments were used and where the path will lead, and my perceptions of the lessons and recommendations that can perhaps be relevant in the Middle East as well.

On the 9th of May, 1950, almost exactly 50 years ago, the former French Foreign Minister, Robert Schumann, made a surprising announcement to the French public, and I would like to quote what he said: Coal and steel production in Europe should be consolidated and placed under higher supervision. This was intended for the coal and steel production of France and Germany, but the treaty that was to be signed would remain open to the addition of other European states.

This proposal came one hour before the moment of birth of the European Union on the 9th of May 1950, exactly five years after the end of the Second World War. The liberation of Germany from the Nazis was on the 9th of May 1945. The proposal was two-pronged. First, there would be joint administration of steel and coal production in France and Germany. This meant, in practical terms, that Germany could no longer wage war because steel is used in the making of weapons. It was a preventive measure, if you will, by the French against Germany, and it represented the first step towards a European federation.

What Schumann said at the time was that states should come together by delegating a number of authorities to a higher authority. It took another year for six countries to approve this proposal and to join it: the Benelux States -- Belgium, Netherlands and Luxembourg --, as well as Italy, Germany and France. On the 10th of August 1952, in Luxembourg, the highest authority of the European Community for coal and steel was set up, the first common European institution created after the war.

What does all this have to do with a common agricultural market? At first sight, nothing. But on second thought, it was sort of a test run. For centuries we witnessed the rise of nation-states and nationalism in Europe, resulting in the Second World War and an enormous number of deaths. And after a century of struggle and bloody wars, the idea was that it was necessary to get together. Those sworn enemies, the French, and the Germans -- who had been involved in all the European wars -- felt they had to come to terms. This was the first step towards setting up the first administrative authority in Europe.

The second stage was in 1954, when the agricultural ministers of the same six European countries -- the Benelux States, Italy, Germany, and France -- met. They felt that what was possible for steel and coal should also be possible for agriculture. At that time, food was not readily available in Europe. The large cities

did not have adequate supplies of farm produce, so the idea was to establish an agricultural market to provide food to every European city and village.

It took another three years, from 1954 to 1957, to bring about the Rome treaties, again, signed by the same six countries. They laid down the following principles: Maintenance of peace, reconstruction of the destroyed European continent, maintenance of freedom, consolidation against the Soviet bloc, sustainable reconciliation between France and Germany, increased political life for the inhabitants, and the unification of European states.

The vision of the declaration of the 9th of May was not directly aimed at the European Union, and its expectations at the time have been surpassed, so I would now like to come to my next item -- what has become of these six European nations.

Today we have a European Union with 15 members and a total population of almost 350 million people. This European Union represents one free market without customs duties. And although some national currencies -- such as that of Denmark and France -- are still in use, there is a new currency, the Euro, which has already been accepted by the majority of member states. The plan is, in time, to have one European government. It is not going to be a commission, because there is already a European Commission with representatives from governments, but we're planning a European government that will not be a federal state. It will be a state of federations, a federation of governments.

In Germany, we have one federal state that gains its authority from independent states that are not competent for foreign affairs, for example. The federation in Europe will be a gathering of national states. At the top will be a European government with special powers in the field of foreign affairs.

What does the world look like today? In terms of economy, there are three main areas in the world. One area is North America, Canada and the United States, with a limited free market between them. Another area is the European Union. The third is what I would simply call the Far East, meaning the Asian states, Japan, and all those states around the Pacific down to Australia and New Zealand.

It is worthwhile noting that the largest countries in the world -- China and India -- do not belong to any of these three main industrialized areas. China and India are still considered developing countries in terms of economic power.

Let me now come to the Middle East, remaining in the domain of economics. I quote your Gross Domestic Products (GDPs), in preparation for discussing the abilities of your countries and to illustrate where you stand in relationship to Europe. Then we will reflect what problems arise from those figures.

Germany has a per capita GDP of \$28,000 and 82 million inhabitants. Israel has a GDP per inhabitant and per year of \$17,500. The Palestinian Authority has a GDP of \$2,000. If my information is correct, Jordan has a GDP of \$1,200, and Egypt stands at \$800. If you compare these figures, Israel in relation to Europe is comparatively poor, but compared to the rest of the region it is a giant. It has had a very large military expenditure, but despite these drawbacks, is almost at the same level as Greece and Spain. Israel is midway between Central Europe and its neighboring Arab countries, a giant in the region in economic terms, and at the same level as certain southern members of the European Union.

There is no question in my mind that this entire region -- Israel and the Palestinian Authority - in terms of its level of scientific knowledge and production skills - is on the verge of making it to the level of the industrialized countries of the world.

One of my daughters is studying information technology. At the Peres Center of Peace there is cooperation in the field of IT between Israel and the Palestinian Authority. My daughter is now doing her residency in Palestine, preparing software for Siemens. What they are doing there is first-class and top-level in terms of technology. In other words, high-tech achievements and technical know-how here compare with the most advanced states in the world, and there are great possibilities for educating the people of this region in the field of high-tech.

I come to economics in the stricter sense. I am grateful to IPCRI and to all the

the population of neighboring countries can be raised if they have an opportunity to export to Europe and if these export opportunities are well developed.

In 20 years there will be 500 million consumers in Europe. In Germany we have seven department stores and chains. One of those chains, Aldi, has 5,000 outlets, all belonging to one and the same corporation. In the winter season, from November to March, this commercial chain requires more vegetables and fresh fruits than Israel, the Palestinian Authority, and Jordan together produce. This means that, as far as the European market is concerned, the requirements of the large buyers cannot be satisfied. They require tons and tons of produce. These main buyers of farm produce are not interested in small sellers. They will look to Latin America, or even the Asian markets, because you cannot supply them with the quantities they require. In addition, the quality of the produce has to be acceptable.

I'm trying, in this brief presentation, to make it clear to you that, only if you work together, can you create a very large resource that can supply these very large buyers who will pay in hard currency for the produce. You have to work together in marketing, in production, and in solving technical problems.

There are many other important elements as well, but I mention these three that should be addressed jointly by the countries of this region. One is marketing. Another is the exchange of know-how in the field of quality of production and improvement of produce. The third, particularly important and relevant for Europe, is environmental standards, which also relates to the solution of the water problem.

The main issue for this region, in my view, is that political will is required in order to develop a common agricultural market. This is a question that has to be clarified at the political level. This has been discussed with the current commissioner of the European Union, and our German and Spanish representatives can confirm this. Beyond any doubt, if there is political will for cooperation, then the European Union is prepared to support this cooperation by contributing its experience, as well as financial resources.

And if that will is enhanced and strengthened, then the European Union is prepared to fund a number of experts who can work here as neutral players. They would not be Jordanian or Israeli or Palestinian. They would be European experts sitting in an office here, rendering services to assist the local states with the experience of Europe, gathered over a number of decades, and these services would be provided without any price tag as such.

The Middle East, like Africa and parts of Asia and parts of Latin America, was something of a colonial market for Europe, however, the colonial powers are gone. We should now benefit from the accumulated experience of the European Union.

There is much conflict and distrust in this region and the resolution of this conflict can also be helped along by European assistance in the field of agricultural policy. And I know that the people of the region are very keen on furthering and progressing in the area of agricultural cooperation.

**Dr. Gershon Baskin (ICPRI):** I know you are not an expert in agriculture, but perhaps you know the answer to this question. How does the European Union today deal with the desire of member states to protect their own national agriculture? How is the issue of competition between the member states dealt with in this common agricultural policy?

**Dr. Johannes Gerster (Germany):** Competition does exist, no doubt. Europe has a very complicated system, but there are advantages of the European market for the individual farmer, and compensation by nationally owned services.

If this system of national compensation did not exist, then, for instance, Jordanian agricultural products would stand no chance of being purchased in Germany. The European policy is such that the products of Portugal, Spain, Greece and Italy -- which are cheaper than those of Germany -- are not made inaccessible to trade. Subsidies to German farmers that result in cheaper production are increased, thereby eliminating the Italians, Portuguese, Greek and Spanish from the German market. On the other hand, compensation is paid so German products will be competitive and will be bought, not only in Germany but also in other European countries.

Competitiveness without national compensation payments is for the specialized agricultural products, such as wine. German wine needs practically no government subsidies because it is in great demand all over the world with great market brands. Spanish and French wines also have no problems. Asparagus and highly qualified fruits are very problematic, and only by means of compensation can the higher production-cost countries be maintained in the markets.

The main advantage of this region with regard to the European region is its favorable climatic conditions. In many areas there are two harvests, and the demand for fresh fruits and vegetables in winter could better be supplied from this region. On the other hand, although there are great efforts to bring flowers in through the Dutch market to the European Union, and there are a number of approaches, without national compensation payments there would be such great discrepancies. The high-priced countries would stand no chance. Therefore, there must be European, national and international compensation measures.

**Mohid Ali Rahahela (Jordan):** Water deficiency is an agricultural problem for Israel, Palestine, and Jordan. Nonetheless, there is a regional potential to produce high-value crops if we can conserve water and land. Another requirement for producing high-quality products to the European market -- for example, strawberries -- would be special technology. This means that the traditional farmer, unless he can adopt a highly technological system of production, will not be able to survive. We must transform our agriculture from the currently preferred traditional system to a new high-tech system that the farmers can adopt.

**Dr. Johannes Gerster (Germany):** Thank you for this contribution. Of course, the water shortage is the principal problem here. For instance, bananas need a great deal of water. Does it make sense to plant bananas in this region where there is a shortage of water, while bananas exist in abundance in other regions? International cooperation brings about a change in agricultural structures. There is no question that it is essential to achieve the environmental standards acceptable in Europe and America for food products. This requires rational production and larger enterprises so as to compensate for the cost factors arising in attaining higher environmental standards. These difficulties are bound to occur.

In Europe, there are green politicians who think environmental protection pays for itself. According to my experience, environmental protection costs a lot of money. It does create jobs, but first it costs money. Otherwise, farmers wouldn't use pesticides to increase their production. If you have to do without pesticides, then you have to find new forms of agricultural production. Otherwise, within this cost framework, you would not be able to attain this level of quality. That means larger farms, more technology, less chemistry, and as a rule, rational cost-saving methods.

The Federal Government of Germany is now preparing to launch an initiative in the European Union. The initiative is aimed at the special contribution of the European Union to this region in deploying and supporting a large-scale research project for the desalination of sea water on a more cost-effective basis; that is, to bring about the artificial increase of sweet water, fresh water. This is essential in order to avoid conflicts between Syria and Israel, to address the water shortage in the Palestinian economy, and to guarantee and ensure, for the long run, the agreements between Israel and Jordan for more fresh water.

Anyone who has lived in this region knows that economic cooperation can be approached from 20,000 places. But wherever you start, you always end up at the problem of water shortage. Since this is essential to the region, and especially to agriculture, I think it would be ideal for the European Union to contribute its know-how towards solving this problem in the long run.

In the beginning of the last century, 540,000 people lived in the area now called Israel and the Palestinian Authority. Now 10 million people are living there. Since water is a factor in industry and in agriculture, and with this great growth in population, new methods must be found to produce water. This is certainly technically feasible. The science must be made financially feasible.

Water shortage is one of the major sources of conflict in this region, and with all the well-intended belief in a higher being, you cannot pray for more water. I was on Mount Nebo in Jordan and struck a stone with a stick, but no water came from the rock. Moses succeeded in doing something that people cannot do now. I know that fresh water can be created with the technology of desalination. Of course, the water must then be affordable. Therefore, the European Union is considering raising resources to contribute to the solution of the desalination problem once and for all.

Incidentally, if the nations in the region do that jointly, it will be similar to the steel and coal union. There will be no military conflicts because they will all be dependent on the water. I do not say this to be cynical. Everything is turning around the same set of solutions. Some problems can only be solved by joint efforts, and I think the European Union must help you with this problem. As a do this.

**Sayed Abd El-Hafez (Egypt):** Each country has its own strategy or policy for increasing production, improving quality, and increasing or decreasing imports. If we succeed in establishing a good mechanism of cooperation around such concerns, how much impact will the GATT have on this mechanism, this cooperation, later on?

**Dr. Johannes Gerster (Germany):** May I give you a historical example. I was in the German parliament when Greece and Portugal became members of the European Union. The German farmers' unions were extremely opposed. They said, we have enough problems with the Italians. Now Spain and Portugal -- and Greece as well -- are joining with huge agricultural surpluses. They will inundate our export and selling markets in Germany. And this was true.

For example, Spanish red wine is high-class. At that time, it cost only a quarter of what German red wine cost in Bonn, and it was clear that the German wine growers had to get some new ideas in order to remain in the market. At the start there were some conflicts, and your remark about national egoism is completely correct. This is normal. If the Egyptian government did not work to improve the life of the Egyptians, it would be driven out. This applies to the Palestinian, Jordanian and Israeli governments as well.

National egoism cannot be talked away. The question is only whether the populations of each nation can be made to understand that, in the long run, national economies will stand no chance in the world market. Egypt's GNP will improve only if they improve their chances on the world market, both with regard to imports and exports. We are all on the threshold of a new century, and I am convinced that your economy is also on the threshold of a technological society. But it will take too long for you to be able, with your resources, to compensate for your deficits. You need help from abroad. And I do not speak only about money, but also about know-how.

Therefore, any type of international cooperation has two sides, and they must be kept in balance. In a common agricultural market you may have to pay a partial price in the short term, because you cannot sell all your products with individual agreements and contracts. But this occurs in a larger framework: in the medium term, the greater selling opportunities in the common market will result in better and bigger business opportunities.

I can only say that whatever we have paid in terms of national egoism in Europe has been compensated for by the successes in the European Union. The market as such accepts that, without doubt, the southern European states have enjoyed increased economic development because of joining the European Common Market. The Spaniards, Portuguese, and Greeks will confirm this. Therefore, countries with a relatively low GNP run a lower risk in joining the Common Market than countries with a relatively higher GNP.

The last outbreak of national egoism we had in Europe was when we introduced the Euro. The Germans were the most critical because, over the last 50 years, the German mark was the most stable currency in Europe. Here, policy had to convince and lead the process. In this we succeeded, and the people do accept it now, although the Euro now has a very bad standing.

In other words, this is entirely an economic framework calculation. And I am telling you this not in order to persuade you, but because every expert in the world has recognized it. National economies, in the long term, will stand no chance in the world market. Even rich Switzerland, in the foreseeable future, will join the European Common Market, in spite of the fact that it has always maintained a history of independence, tax benefits on bank savings and so on. But in the long term, this will not be enough to maintain European living standards, and they will come to us in the near future.

In this region, I think the neighboring countries would be well advised -- for instance, in agriculture -- to deepen cooperation and to enter into new international agreements. Firstly, I'd like to see individual joint ventures. There are lots of agreements that have not been implemented so far. I am against the policy of concluding ever more agreements that will never be implemented.

Secondly, the idea of Mediterranean cooperation, including Greece, is very attractive. It is, however, of little interest for Middle Eastern agriculture because the climatic conditions of the South Europeans means that they do not need your products as we Central Europeans.

Thirdly, since the European Union is a venture to maintain peace, the European Union must never make a policy of limitation. There is a position of associating Israel to the European Union. Egypt has aspirations to be let into the European Union by means of an association. The European Union must not exclude

anybody. Here the model of association must be used, and this applies equally to Jordan, Egypt, the Palestinian Authority and to Israel. This shows that you will always be involved with the European Union, not in a negative sense, but in the sense of cooperation.

It is absurd that the countries or states in this region will each individually cooperate with the European Union but will not cooperate with each other. You have fantastic lands and fantastic people. You must do more together.

**Sayed Abd El-Hafez (Egypt):** The desalination approach may be feasible in developed countries, but not economically feasible in developing countries such as Egypt. We will need EU help. The sort of combined approach to the problem of desalination that you outlined should be used when looking at agricultural development and marketing issues in the future.

**Dr. Johannes Gerster (Germany):** I agree with you 100 percent. The water issue is particularly acute in this part of the world, but it is a problem for all of humankind. My hope is that once the European Union is more involved in this area, it will provide services to the whole world.

Here I would like to relate to my personal experience. In the 1950's, 1960's and 1970's, we were engaged in a historical competition in Europe between the western democratic system and the USSR and communism. That was the competition and the struggle. I have always stood up in favor of a federal German defense force. I wanted to say this first so you can appreciate what I'm going to say next.

I am not a pacifist. Bear that in mind. But when you look around and see what research capacities have been devoted to the development of weapons all over the world, and how much is spent on weapons worldwide, then the funding of the technical development of desalination looks cheap. This is a fact. This is why I want you to understand why I become very impatient and emotional when I see these horrific scenarios -- the Palestinian Authority is suffering a water scarcity, Jordan has inadequate water treatment, the need for water in Israel -- and the fact is that there is a ready solution and nobody is implementing it. Desalination can be solved as far as funding goes.

But more imports are required, and imports cost money. This must be addressed. Therefore, I repeat, this region can serve the whole world because water problems exist around the globe. It is more acute in this region because industry is more developed here than in China or in India. In 50 years, water consumption will be multiplied many times over. This is why this matter has to be dealt with on a worldwide basis. We are at the forefront of a problem that can and must be solved. The problem in Egypt is not as dramatic as the problem in the Palestinian Authority, but you will have a water problem because you have irrigation requirements for an enormous land surface. So you are not here with your own interests only. These are common interests.

**Ali A. El-Saied (Egypt):** To create economic integration you have to have homogeneous economies in the sense that the countries will cooperate with each other. For countries to cooperate with each other, they should have some sort of homogeneous economy. We are now talking about four regional countries with heterogeneous economies, some much more advanced than others. And there is some reluctance because people believe that one of those economies could, one way or another, dominate the area. How can we solve this conflict so that these countries can equivalently work together and avoid the dominance of one economy over the other.

In Europe, for example, in the beginning people believed that Germany's very strong economy would dominate the European Community. We have a similar feeling here in our area. What is your opinion about that?

**Dr. Johannes Gerster (Germany):** Here I will try to answer you with an image. I dream that, tomorrow, all commercial trade borders between the four countries will be done away with. There will be free movement. There will be freedom of cooperation in different undertakings. This is, of course, a bit extreme and exaggerated, but I am trying to show you something. In this area people are engaged in trading goods between producer and consumer. All those are people who could trade without any protective laws or regulations. Let's say that, in the future, Israelis will eat only Egyptian fruits and vegetables, simply because it will cost less than Israeli produce.

I understand your point. In a free market, the king is the one who is the cheapest.

But it is also true that without protective rules in such a market, the market cannot operate. A free market does not mean an arbitrary market because freedom is never arbitrary. It means freedom with responsibility. I cannot, in the name of freedom, kill my neighbor. This has nothing to do with freedom. Freedom is not arbitrary. It must be a responsible freedom, and this also holds true in the economic field. I must provide opportunities for competition, and fair competition. In a national framework you have anti-trust laws. These anti-trust laws, in a country like Germany, make it impossible for there to be only one cigarette-producing company or only one drug-producing company. And if you need protective laws within a state, you also need them in an international market. Such laws would uphold equal opportunities for all.

Of course, freedom is a value. Equality is also a value. But equality does not mean that every human being must have exactly the same opportunity as every other human being. Not everyone can be a teacher. Not everyone who can count can necessarily become a tradesman. But opportunities should exist. If you have a union of six or eight states, then you must try to avoid conflicts that arise from the different levels of development within those countries. You need national rules and international rules. Otherwise, you are out in the jungle and the tiger eats you all.

You need some protective regulation, and this radiates out. The somewhat stronger Israeli science and research should not have a say in every field resulting in the others becoming underlings. That has to be solved by regulations. This is why one should move ahead step by step. This is why doing away with borders is just daydreaming. It can be a dream that turns out to be a nightmare. The more I open up, the more I have to regulate. Everything has a price. Today, a German farmer has more regulations to observe than before, and he doesn't like it. But he understands that it is necessary because otherwise he cannot sell his produce abroad. So the fear of domination will be abated the more regulations accompany the existence of the free market.

**Dr. Gershon Baskin (IPCRI):** We would like to thank you very much. Your remarks were very instructive. The lessons of Europe with regard to the cooperation that began with the coal and steel industries are very valuable to us here as we attempt to lay the ground stones of wider cooperation and a possible regional agricultural market. There is certainly no area in this region where there is greater cooperation than in that of agriculture. It is fitting that wider economic

cooperation in the region will begin with agriculture and will continue with agriculture, and that the agricultural sector can lay the groundwork for future economic and political agreements among us all.

### Guideline Questions for Seminar Discussions

**Dr. Gershon Baskin (IPCR):** We're going to be breaking into three groups -- phytosanitary and health standards; marketing, forwarding, packaging and quality standards; and heads of the delegations.

In looking at the guideline questions, try to now identify the specific issues that you would like to focus on, the information that you can provide to answer these questions, and make up a work plan that includes the time we have together tomorrow. So the focus for now is to set your agenda for the working group. What are the different issues that each person would like to address in the working

#### **Guideline questions for the heads of the delegations:**

What are the mechanisms needed to create more cooperation between the four Ministries of Agriculture?

In what areas should cooperation be emphasized?

What are the possibilities for a meeting between the four Ministers of Agriculture? There has not yet been a meeting between the four Ministers of Agriculture, and perhaps this is a recommendation that we could make here, if acceptable, to really move regional cooperation forward.

What are the possibilities at this point for regional cooperation in marketing? What are the limitations?

What could the EU do to help facilitate regional cooperation with the four ministries?

What are the obstacles to greater regional cooperation between the four countries? We have to confront real obstacles that exist as well, and talk about how to remove those obstacles.

What is the current level of the fresh produce exports of the individual countries to Europe?

We can do an assessment of mutual or individual advantages and how we can work together.

**Guideline questions for the other working groups:**

What are the current standards for the specifics of your working group area -- in phytosanitation, plant protection, disease control, pest control?

How are standards in your country made? If we're going to talk about a process of harmonization of standards, we have to understand how standards are made in each of our countries.

How are standards changed in your country?

How do you use international standards, or do you have your own local standards?

If you have your own local standards, what are the mechanisms necessary to accept international standards?

How are standards verified?

How are standards enforced?

Many countries have standards on paper, but there is no enforcement. What is the level of enforcement in each country?

What is needed in order to create regional harmonized standards?

What is your current level of fresh produce exported to Europe?

What mechanisms can we propose to create greater regional harmonization of standards?

## Seminars

### Phytopathology and Health Standards Working Group

**Benjamin Raccach (Israel):** I am going to give you an overview of plant protection research conducted at the Vulcani Center, working in the field of phytopathology. I will talk about the protection of plants from pests and diseases, with an integrated approach to economically competitive agriculture. Our world has become very competitive, and it is important to use these controls in a way that will keep costs competitive. Those of you who have not yet visited our center in Bet Dagan are welcome to do so.

Our agricultural research organization, the largest agricultural institution in Israel, is comprised of seven institutions, including one for crop protection. We have about 240 scientists, 650 employees, and are mostly oriented towards applied research as opposed to basic research. Funding comes from the Ministry of Agriculture, from growers and from national and international competitive grants.

The specific problems of plant protection in the Middle East are the following:

1. The Middle East region is at a crossroads between Europe, Africa, and Asia. Therefore, it supports crops from tropical, sub-tropical and moderate countries. This widens the reservoir of pests. In Europe they have only European pests. In Africa they have only pests from Africa. In our region we have pests from Africa and Asia and Europe.
2. Our climate is moderate. Winter here is really the best weather of the year, if there is winter at all. That means that the pests do not die. In Europe, when there the spring, we have a very high number of insects from the very beginning, and therefore, more plant protection problems than in Europe.
3. Crop intensification. We used to have one plant every meter or so. Now we grow in very crowded greenhouses. There are too many plants. All the pests can easily and quickly move from one plant to the next, again resulting in increased pest problems.

Finally, there is now world trade. We import and export plants. We have visitors from abroad. Not long ago I was in the airport and saw somebody coming back to Israel with a plant in his hand. I asked what he was

bringing in, and he said: "I'm bringing in some new plants, circumventing customs and bringing in problems."

I will now give a few examples of pests that recently entered the Middle East. ***Aphis spiraecola*** on apples and citrus came in from the United States in the 1960's and 1970's, and is worsening in this region. It is a very bad pest that causes severe damage. ***Monelia costalis*** on pecan nuts also came in from the United States. ***Frankliniella occidentalis*** thrips are all over the Middle East as is ***Dialeurodes***, citrus white fly. We also have viruses: on citrus, on zucchini, on tomatoes, and a virus causing trouble in potatoes. These have all entered our region only recently. Finally, pear fire blight, and strawberry ***Anthraxnose***.

These are just a few examples. There are many more and they are very difficult to control. And these problems are common to us all. We have to be careful. I have lodged many complaints with my government. What is done at the airport to stop people from bringing in materials is not sufficient. We are speaking about standards. One of the things we have to do together is to establish standards to prevent these pests from coming into our region, because they do not recognize borders. A pest coming in to Israel can get to Jordan and Egypt. A pest coming in to Jordan can go to Israel or Gaza or Egypt. So we have to do something to stop them.

One epidemiological parameter is the sources of pest and diseases. It is very important to determine their source of origin. For example, sometimes they come from a neighboring crop. Some come from wild plants, weeds. If we know where the pest or disease is coming from and we can clean up the source, we can avoid the disease.

The second epidemiological parameter is the environment. Sometimes, if we change the environment, we can prevent some of these viruses and diseases.

The last epidemiological parameter is a susceptible host. There are hosts that are very susceptible and others that are more resistant. If we use a susceptible host,

we increase the danger of the disease spreading very quickly. But if you use sour lemon, for example, you can prevent the spread of the disease.

What are the sources of pests? Pests can come from other countries and continents, either flying in themselves or being carried in by people. They can also come from the same hosts in the vicinity. They can come from the neighboring plot. They can also survive from season to season. Let's say we finished with a pepper crop, but left a few alive that we didn't have time to take out. If we put another pepper crop in there, the pest can go from that old pepper to the new one.

Finally, some pests have a very broad host range. If a pest has a narrow host range and, for example, only grows on citrus, then we only have the problem on citrus. But some pests, like the white fly, invade a broad range of hosts. If you kill one host it will just go to the next, so that doesn't help very much. The same is true for pests that come from another plot.

There are also many cases of movement of pests by developmental stages -- by walking, rather than flying as white flies or leafhoppers do. Many disease agents are spores that are carried by the wind. If it is a hot wind from the desert, it will kill most of the spores. But if the wind is coming from the sea -- in Egypt it's from the spores to survive. In this case they can travel long distances and still remain alive.

There are also cases of zoospores that can live in water. We talk about recycled water, but we must be very careful only to use water that has been very well cleaned. Sometimes by recycling the water, we also recycle the disease agent and move it from one crop to the next. We have to be careful.

There is also transfer by people. We have zucchini virus in this area. Not long ago I watched a grower use a knife to cut one zucchini, and then move to the next zucchini, cutting it with the same knife. In this way he succeeded in inoculating all the plants and infecting the entire field. I asked him why he didn't pick by hand, and his answer was that it was easier with the knife. But he lost his whole field. So people can be very good transmitters.

Grafting is also very important. It is important to graft from an area that is not infected.

There are several ways to prevent disease, infection and the spread of disease. One is thermotherapy. One thing we do in our laboratory is to treat plants with elevated temperatures, like 40 degrees. This will kill many of the disease agents but does not kill the host.

Second is treatment with antagonist substances. You can use anti-fungal, anti-bacterial or anti-viral agents on reproduction material and clean them before you use them.

Third is shoot tip culture. If you take just the very tip of the plant that is clean and put it in tissue culture, you can get it free of disease and can start all over again. For example, in our laboratory we developed such a system for bananas, and our bananas are now free of diseases because they are grown in this way. I saw the same thing very successfully done with dates in Morocco. They do a wonderful job with that.

Fourth is to graft onto rootstock that is resistant, thus preventing diseases. We can prevent the spread of pests between hosts by using pest-free or virus-tested propagation material.

Other ways include prophylactic control, the elimination of pest breeding sites, and discontinuous cultivation. Stop growing a crop for two months, and then continue. This prevents the pest from moving from one area to another.

We have done that very successfully in the Arava area for many years. All the growers there agreed to stop growing one crop for two months, and then they all went back to it together. Two months is not enough in all cases, but for viruses and fungi it is very successful. For insects it is not enough time. This works under desert conditions because there are no weeds. Everything around is dead. Near Jerusalem or Tel-Aviv it is not effective because there are weeds. But in the desert it works well, so this is a very important approach for Egypt and Jordan and for us in the Arava.

We can also prevent primary and secondary infection by interfering with pest arrival, with mating or with feeding. Pheromone use will interfere with mating, or we can interfere with feeding by deterring.

We also have physical measures to prevent infection. For example, we can use reflective surfaces for deterrence. When the pests see a reflective plastic or roof, they move away. Other approaches include yellow mulches, net covers, UV-absorbing plastic and nets, and border crops.

Most aphid species and white flies are attracted to the color yellow, and it is used to trick them. If we plant tomatoes on a yellow plastic sheet and put it in the field, it will become very hot from the sun. When they land, they will die from the heat of the plastic. It's no good when the plants cover the plastic. But for the first two or three weeks, this is a very simple and practical approach. Just yellow plastic.

Net covers and physical exclusion of vectors. If there are holes smaller than the size of the insects, they cannot get in. This is relatively cheap compared to the greenhouses. But if the insect manages to get in, then it can reproduce, and there is good culture on the inside. It is important to be sure there are no insects going in when the cover is put on. This approach allows us to grow tomatoes that have tomato yellow leaf color virus with only two or three sprays a season. And if you close it tightly, you can prevent the white fly from entering.

Another possibility is to camouflage the crop. If the insects don't see the crop, they won't land on it. When insects see green, they go for it. If they don't see it, they don't come and they don't infect.

A new method developed in our laboratory is UV-absorbing plastics. These are plastics with additives that absorb the UV portion of the spectrum, and they have been found to strongly affect insect activity. Not just vector activity, but insect activity. It confuses them. White Flies, aphids and thrips don't fly normally under UV-absorbing plastics. It's incredible what it does. We also use applications of mineral oil to prevent viruses. This prevents the transmission of virus by insects and is good for non-persistent viruses that are carried for a very short time by the insect.

We also use biological and microbiological control: biological control against the Codling Moth in apples, and natural and recombinant baculoviruses against *noctuides*. We also use the augmentation of *microbial* agents with plant *amelyo* chemicals. All these are now researched in our laboratory to prevent infection. For microbiological control, we use *bacillus neurigenesis*, baculoviruses,

entomopathogenic fungi and entomopathogenic nematodes that we produce in our laboratory to kill insects.

A month ago I was in Cuba, where they now produce microbiological agents. *Metasaf* is used against white flies. It's actually *metresium*, a fungus. And *tricosaf* works against *trichoderma*, against fungi. You can buy them and use them in the field. You are spraying, but it's not an insecticide, it's a biological agent. They also have bacillus *neurigensis* there in bottles. You buy it like you would an insecticide. It's very cheap, a liquid that they put in water. It is sprayed like a liquid.

We can also increase the resistance of the host to the pathogen by using resistant-variety cultivars, cross-protection, and by conferring resistance by transgenic expression. These three methods are utilized in our laboratory.

Conventional breeding: This is still successful today for a number of crops, such as cucumber resistance. But there are crops with no resistance, and we have a problem with those. In many cases the resistance also breaks down after some time, and then you need to start all over again.

In Israel, we do a lot of work -- and this is my personal project -- on cross-protection in squash. Treating with a mild virus that we inoculate by spraying very young in the nursery is very effective.

We now have, in Israel, about 12,000 dunam of watermelon and melons and squash in the nursery immediately after germination. You spray the mild virus once in the nursery so the grower buys the seedlings already treated, and then plants them in the field. Instead of paying one agora per seedling, you pay 1.2 agora, but this plant is now resistant to the virus. This pays very well. An Egyptian nursery is currently negotiating to sell this in Egypt. There is also a nursery near Jenin that is now selling the seedlings all over the West Bank.

We have Integrated Pest Management (IPM) in field crops and greenhouses to control thrips using biological enemies; prevention of pest penetration using screens; host plant resistance to *homopteran* and *thysanopteran* and spider mite; study of biology, phenology, newly introduced pests; the use of introduced genes into cotton to make it transgenic and resistant to cotton prodena or other cotton pests.

We also have IPM against foliar diseases. First we have to identify the disease agent. Then we integrate management using biological and chemical control, and biocontrol development and production in the greenhouse. Finally, we study pathogen resistance to foliar disease agents.

Soil-borne diseases have to be controlled. These are all major soil-borne pathogens. We have to study their etiology and epidemiology and how to control them. The technique we use is solarization, biocontrol, using compost. We found recently that if we use organic compost, we can reduce the amount of soil-borne diseases and, eventually, also chemical application. But if you use all three -- solarization, compost, and a little bit of pesticide -- you can reduce the soil-borne diseases.

There is also IPM in orchards. Here we control spider mites using predacious mites. We use mites against aphids and leaf miners, very significant problems in citrus and stone fruits. We study the biology and phenology of new pests, for example, the biological control of thrips in avocado.

**Nasser Al-Jachoub (Palestine):** I think they took some of these spider mites to a greenhouse in Jericho last year to check it. It was not successful.

**Benjamin Raccah (Israel):** Maybe the temperatures were too elevated.

**Nasser Al-Jachoub (Palestine):** That's why I think this would be unsuccessful in the Jordan Valley.

**Benjamin Raccah (Israel):** I agree, because of the temperature. In order to have success for spider mite, you need the enemy to grow faster than the prey.

**Nasser Al-Jachoub (Palestine):** You need lower than 27 degrees in the greenhouse. We had 32 degrees inside the greenhouse.

**Benjamin Raccah (Israel):** Temperature is a major factor for success.

**Mohammad El-Hamalawi (Palestine):** We used it in Gaza, sometimes with good success and sometimes not. We found that if we release the spider mite naturally

with a low population of the insect, we achieve successful control, unless the population of spider mites is very high.

**Benjamin Raccah (Israel):** That's right. You have to have a balance between the spider mites and the predacious mites you are using. If there are too many pest mites, you cannot kill them.

I will conclude my presentation now by saying that the general approach must be integrated pest management. There is no one single technique that is sufficient. It is impossible to completely avoid the use of insecticides or pesticides, but if we monitor the pest and use combinations of physical, biological and chemical treatment, we greatly reduce the risks of pesticide use. We can use much less. It will cost us less money, we will get better crops and we don't get the breaking of resistance. This is integrated pest management.

**Nasser Al-Jachoub (Palestine):** When we use compost, we reduce the number of fungi or soil-borne diseases. Can you explain why?

**Benjamin Raccah (Israel):** Apparently, the breakdown of compost materials produces humic acids that are toxic to the soil-borne fungi. When you put garbage in your garden, you get very highly elevated temperatures and a bad smell. The bad smell is from the breaking down of the organic material. Some of this material is toxic to the fungi.

**Nasser Al-Jachoub (Palestine):** From my experience with compost, it introduces many kinds of microorganisms, in large numbers, which fight with the fungi for the host. In this way you can reduce the number of fungi.

**Benjamin Raccah (Israel):** I agree. Compost is not something that is well defined. It also depends what you are using to make the compost. Compost from a city has different components than compost from a village or a farm. We now have a group studying what it is about compost that kills fungi. It's still being researched. But what we already know is that it is working.

From a practical point of view, it is not important to me if it's the microorganism or the amount of toxicity. As long as it kills mabruk  
But I agree that we should study this in order to make better compost in the future.

**Nasser Al-Jachoub (Palestine):** Also, if we use medicinal plants in the soil, such as za'atar (in the same family as thyme), we can kill all the soil diseases.

**Benjamin Raccah (Israel):** Right. And not only za'atar, but all aromatic plants,

**Nasser Al-Jachoub (Palestine):** Yes. You can kill nematodes especially.

**Benjamin Raccah (Israel):** Yes. We are working on this. I have a Druse friend who showed me spice plants in his garden, and they are never infected with pests.

About five months ago, in the middle of December, I was in a London open market and saw persimmons there. They had been exported from here. You know when persimmons are picked. December is quite late. But look at the quality. So the other aspect we have to keep in mind is how to maintain the crops after they are picked -- post-harvest. If you treat them right in the proper temperature and atmosphere, and transport them carefully, you can attain this quality of fruit reaching the market.

**Nasser Al-Jachoub (Palestine):** As you mentioned, some pests and diseases come from outside, from the United States, from Europe and elsewhere. The inspection and extension services are not operating very effectively. Anything can be moved from one place to another, from an infected area to a non-infected area. If we are going to talk about phytosanitary, first we must talk about laws, and how to control the movement of diseases and pests from one area to another. This is one of the most important problems. And it's a human problem.

**Benjamin Raccah (Israel):** I totally agree. You are raising a very important question. I don't have an answer for that because discipline is required. We have a difficult time preventing people from driving crazily in my country. There are laws and lights and police officers all over the place and people just do what they want. So if you cannot keep people from life threatening activities such as this one, how can you prevent people in a normal country from moving plants from one place to another?

**Mohammad El-Hamalawi (Palestine):** You can inspect. You can prevent 90 percent of it.

**Adnan Abdel Nour (Jordan):** When we had a problem with date palms, we circulated orders and information to agricultural directorates in different areas. We clearly communicated to them that the movement of date palms from one location to another was prohibited. This order was given not only to the agricultural directorates, but to the governorates as well. So everybody was responsible.

But as Benjamin Raccach said, it's easy to issue a law or an order. To enforce it is another problem. You can always find cheaters. You can always find bad drivers.

**Nasser Al-Jachoub (Palestine):** This is not the first time. Thrips also moved north to south because no one was responsible.

**Benjamin Raccach (Israel):** That is absolutely right. The first case of thrips was identified in our laboratory. So we got an order. We had a meeting of all the people responsible with regard to the importation of pests and we put out a new order, a new law. We did everything, and it didn't help.

There are three kinds of people. There are those who are intelligent and knowledgeable, and they will behave. Then you have those who know, but are undisciplined. But there are others who just simply don't know. Sometimes they are citizens who buy a flower, a plant in a nursery, and don't check it. They take it to their mother-in-law as a present for the holidays and they don't know they're bringing in a problem, that they are importing thrips.

Abdel Nour talked about distributing orders and information to the farmers and the growers. I agree. But you cannot reach everybody this way. And some pests, unfortunately, are even in people's homes. Even these flowers here on the table can easily support thrips. So I think that it is very important to use the media -- television, radio -- because that reaches everybody.

A friend from my laboratory is running a television program every second week in

ul.

**Nasser Al-Jachoub (Palestine):** Every morning, at 5:30 or six o'clock, I turn on

the farmers to use chemicals. If you do not have an infected greenhouse, spray so that you will not get infected.

**Benjamin Raccah (Israel):** I have to write this down.

**Mohamed Mohamad Salem (Egypt):** I listen to this program daily in Egypt.

**Nasser Al-Jachoub (Palestine):** We sit here and talk about the safe and minimal use of pesticides, while at the same time: the simple people are hearing something else.

**Benjamin Raccah (Israel):** You are right. I have to check this out.

**Adnan Abdel Nour (Jordan):** It's very dangerous, but we are doing the opposite right now. Just a few days ago, our IPM team leader held a press conference for representatives from all major and minor newspapers and radio stations, and explained to them our strategy and policy. We are now in the final stages of issuing an IPM policy in our laws.

**Mohamad Mohamad Salem (Egypt):** But it is difficult for us. In a developing country we still need high production, not quality. This is a fact. Each hectare can produce about 80 tons of tomatoes using chemicals and mineral fertilizers and so on. But under clean agriculture, we don't get more than 30.

**Benjamin Raccah (Israel):** Forgive me for arguing with you. In 1991 -1992, I participated in a project about 20 kilometers from Gaza. They had problems there with tomatoes. They were spraying once a day. They said that if they don't spray, production will go down. We were a team of scientists, each one dealing with a specific problem. I came for viruses, another for white flies, another for fungi, and another for mites. And we dealt with it. We reduced the number of sprays to four for the whole season, and yield was exactly the same as in places where they spray all the time.

But we did a few things. First of all, we removed all the weeds all around the greenhouses. We made the surrounding area totally clean. Second, if there was a wind and there was a crack in the screen, we immediately closed it. We trained the farmers how to enter the greenhouse. Sometimes they would go in with boxes. They would open the door, leaving boxes to hold the door open, and

insects would get in. We taught them to open only one of the double doors at a time. Enter one door. Close it. Open the other door. And then enter. If you do that, and are also careful about biological control, you can reduce the spraying. I am not saying pesticides are unnecessary, but that it is possible to reduce their use.

But this is a very good point. You cannot say do this, do that, and then tell the farmer to spray. That's stupid.

**Nasser Al-Jachoub (Palestine):** In Israel, I am working on a team in an IPM project. And until today, we have not been informed about where there are new infestations with new pests. Information sharing is essential.

**Benjamin Raccach (Israel):** I agree. That is why we are holding this meeting.

**Nasser Al-Jachoub (Palestine):** If we sit and talk on the political level or the directors level, and don't disseminate the information about the problems to all sides, then we have done nothing.

**Benjamin Raccach (Israel):** We all have to agree that this is one of the things we must share. If there is a new pest in Jordan, we all have to know -- the Egyptians, the Palestinians and ourselves. If there is a new pest in Egypt, in the Sinai, we all have to know so we can be prepared. We have to agree that whenever there is a new pest, we must spread the word amongst us. We have to send a notice, a letter or whatever, that we found pest A, B, C, D. Be prepared.

**Mohammad El-Hamalawi (Palestine):** Now let us talk about the principal issue, phytosanitary standards. We must think together about what phytosanitary standards we need in order to encourage the import and export of goods and agricultural products among our four countries. We must agree on some kind of phytosanitary standard suitable for our countries.

**Benjamin Raccach (Israel):** The first point in phytosanitary is that when you have a new pest --

**Mohammad El-Hamalawi (Palestine):** -- there is exchange of information.

**Benjamin Raccah (Israel):** The first thing is identification. Before spreading information, we have to identify. Sometimes you think it's a new pest and it's not new. It was there before. So the first stage is identification. And then, if you find something that you don't know, in alcohol or in some other way, send it to all of us. There may be an expert in Egypt or Jordan or in our laboratory who is familiar with it.

**Mohammad El-Hamalawi (Palestine):** Let's agree that the exchange of information among us is very important. This is first.

In my opinion, it is very difficult to establish one phytosanitary standard or regulation for our four countries because every country has specific kinds of insects. There are some insects and pests in Egypt that we don't have, and vice versa. We might have some virus in Palestine and in Israel that is not found in Egypt.

**Mohamed Mohamad Salem (Egypt):** But they can cross the borders.

**Mohammad El-Hamalawi (Palestine):** The borders are inspected. We can't have one regulation for all of us, but we can set down principles. And then each country can add details.

**Adnan Abdel Nour (Jordan):** I agree. I would say that we should create phytosanitary standards based on the following criteria: Firstly, the exchange of information among the four regional countries; secondly, the identification of pests, disease agents, and vectors; thirdly, the establishment of unified testing; and of course, quarantining of pests and residual pests as well.

**Benjamin Raccah (Israel):** I would like to add one thing, a database.

**Mohamed Mohamad Salem (Egypt):** Establishing a network of information, creating a database.

**Benjamin Raccah (Israel):** A data base with a map, for example. We prepare a map showing what pests are present where in our region. Each one of us prepares one, and then we can exchange this information among us. With computers we can transfer the information within a day.

**Mohammad El-Hamalawi (Palestine):** This is very important.

**Mohamed Mohamad Salem (Egypt):** Even on the same day.

**Adnan Abdel Nour (Jordan):** Also harmonization of actions taken when a pest is recognized within one of the borders. It's easy to agree on such a point.

**Mohammad El-Hamalawi (Palestine):** Do you think we need a subcommittee for plant protection to meet once every six months or so, according to our needs, to discuss together all the problems related to phytosanitary?

**Adnan Abdel Nour (Jordan):** Yes.

**Mohammad El-Hamalawi (Palestine):** An official subcommittee comprised of the four countries.

**Adnan Abdel Nour (Jordan):** How standards are arrived at in any country is through committees of technical specialists. We can suggest that technical specialists prepare these standards.

**Mohammad El-Hamalawi (Palestine):** We tried to import date fruits from Egypt. I discussed this with the director of the Department of Plant Protection in Israel, and according to Israeli regulations, it is prohibited to import dates from Egypt. Why?

**Benjamin Raccah (Israel):** I will ask. I don't know.

**Mohammad El-Hamalawi (Palestine):** They told me it was because we know nothing about the pests attacking dates in Egypt.

**Benjamin Raccah (Israel):** That's the reason we need a database.

**Mohammad El-Hamalawi (Palestine):** Therefore, I suggest a subcommittee where, for example, the Egyptian delegation can tell us which kinds of pests attack dates in Egypt. Without such a prohibition, we would easily be able to import the Egyptian dates we need.

(The second session of the Phytosanitary and Health Standards Working Group  
recommendations is  
presented in the last chapter.)

### **Marketing, Forwarding, Packaging and Quality Standards Working Group - Session I**

**Amir Heiman (Israel):** Our task here is to try to identify what we can do together. During all these years that I've been interested in the problem of quality and fresh produce, I've met a lot of ambiguity and misunderstanding about this concept, how you define and measure it, and then how do you build standards. And during all the years that I've been working in the area of produce marketing, I've been watching the competition in markets over time and trying to understand what makes one succeed and another fail.

Of course, when it comes to regional cooperation, I think that cooperation in marketing information can start right now. This can benefit all four countries. And then we can think together about what else we can do before this region becomes a free market zone, because that will take some time. What can we do to make it happen sooner? How can we influence our governments to waive trade barriers, bureaucratic barriers, stupidity barriers, and so on.

I think that, because we are a very compact group, we can each discuss, from our own experience, our know-how. I know the situation in Israel very well. I know very little about the situation in Palestine, Egypt and Jordan. So we can really open up our minds and try to think together, and the outcome should be the benefits of cooperation.

**Ben-David Ran (Israel):** I've been dealing with quality control in exports in Israel for about 15 or 16 years, and only the last two years with standards for the domestic market. This issue is very complicated. I'm only starting to deal with it, so I won't talk now about implementation, which seems to be even more complicated. I am only talking about the domestic market in Israel and the region.

Tomorrow I will be making a short presentation about our policy, how we need standards here in Israel for the domestic markets, and who these standards serve -- the grower and the consumer and so on. Later I'll talk about my interpretation of the standards from the legal point of view, because we don't mean standards only

in terms of how the produce looks, its weight and size and so on. It's too early to talk about it right now, but we think that without GAP -- Good Agricultural Practice -- in the future, producers will not survive.

We can see from what's going on in the world -- and Europe is leading the trend -- that not only the final point is important, but the whole process. From the field to the orchard through the packinghouse, the entire chain is very important in terms of standards, and not only how it tastes, how safe it is or how nice it looks.

Then I will talk a little about our process here in Israel with regard to building the standards, from their legal basis to how we think we are going to implement them. And I will also give you some samples of methods we are using for interpretation of the standards and how to raise the awareness of all those who will be using the standards, because even seed manufacturers have to know what the characteristics of the product need to be. And standards are not something static.

the next five or six or ten years. And of course, the standards we have now -- or the interpretation of the standards -- was not the public taste ten years ago. They change all the time.

But the real issue is national regulations. Are they only minimum requirements, letting the market play by its own rules and the sky is the limit? National requirements or laws can never require the highest quality because not everybody can afford that, and then you would limit the possibility of parts of the population to deal with the product they want. So this is a big discussion. What do national or regional standards really have to entail?

I can tell you that the European Community requirements are minimum requirements because the standards of the supermarket chains -- in England, for example -- are much higher than the EC requirements. So do the EC requirements have to adopt the supermarket chain requirements? This is under discussion.

I will talk to you about some of our work with digital imaging interpretation of the standards, and also how we use this equipment in order to train our staff. And I don't mean only our staff, because you have to train all the people from the growers to the packinghouse to the commercial people and so on. Even the person in the supermarket who is responsible for the fruit and vegetable section

needs all this information in order to know whether what he received meets the regulations and requirements and so on.

**Mustafa Salma (Palestine):** The main difference between our countries is that you have different bodies working in the field. You have multiple organizations for the mechanism of action, for the quality standards, and also for the establishment of Israeli standards. We can benefit from information about the establishment of these standards in Israel. But what is the benefit of regional standards?

According to my concept, we want to make these standards uniform among the four countries in order to facilitate our dealings. If we have more restricted standards than, let's say those of the EC, it's to protect high quality and to prevent outside countries from sending their inferior products into our region.

But if I formulate regional standards, can I deal with the outside countries according to their standards, or according to international standards? And how do we establish these regional standards? Are they dependent on the international standards? Every country in the world has its own specifics or exceptions for certain products.

**Ali A. El-Saied (Egypt):** Since we are focusing on a specific issue, how to enhance regional marketing and enable our countries to compete more efficiently in the international markets, we have to do something to show people the benefits of this. You cannot do this without well-prepared studies that clearly demonstrate the benefits of such cooperation. None of us knows the marketing systems of the other countries, so I propose a marketing study that describes the marketing channels in each of the four countries and the similarities and dissimilarities among us, including local marketing and export.

Such a study will show us potential areas of cooperation. For example, the building of standards: using packing materials more cost-effectively; penetrating markets more effectively; in pointing out barriers we face in the export markets; and, how to deal with those barriers, and negotiate in the export markets to eliminate them. Such a marketing study could be a very useful base for discussion and for developing a joint marketing plan for export from the four countries.

Such a study would also be very useful to enhance private-sector cooperation and joint ventures. For example, people could be shown the benefits of joint

ventures focusing on the feasibility of jointly producing and exporting fresh produce and how people could cooperate to produce these products with lower cost and higher quality. Other studies could be done to encourage people to establish those types of joint ventures.

As a group, we have to understand our situation compared to others, and this cannot be done without reliable information, analyzing this information, identifying and prioritizing the best opportunities, and then assisting the people working in those areas to benefit and to penetrate the market more efficiently.

Therefore, as the basis for developing a joint marketing strategy for our four countries, I am proposing that we need, in addition to a marketing intelligence system, a series of specific studies. These studies would be used at a later stage to identify the specific contributions of each country to the larger strategy that will enable us to compete more effectively in the international markets.

We also need to understand how the different countries are dealing with marketing problems and try to unify the way people are thinking about marketing. In addition, we need training programs for growers and exporters. If IPCRI could bring together some private-sector people from the four countries and give them some training in how to manage the export of fresh produce, this would create a unified way of thinking and dealing with the problems. This would also create a base for regional cooperation among those private-sector people.

So at this stage, instead of talking to the governments about changing laws or creating quality standards, let us first start establishing the base for cooperation through carefully prepared studies, training, idea and information-sharing, and seeing the benefits of working together.

**Ahmed Al Kayali (Jordan):** I'm working in the post-harvest department. We have set local standards, based on international standards, which cover almost all the fresh produce products available in the Jordanian markets. The problem we face is implementation. We apply this standard on imported and exported fresh fruits and vegetables. Those who export to Europe must apply the standard or their products will not sell there.

We face a problem with exporters exporting to Arabic markets, such as the Gulf. The Gulf markets have no restrictions with regard to quality, and the exporters

export anything, regardless of quality, or packaging. This, of course, negatively affects the quantities supported in that market and their ability to compete, because the Gulf countries import fresh fruits and vegetables from many countries other than Jordan, including from Europe. We are exporting our produce to consumers of low income in the Gulf countries -- the expatriates, the Indians -- not to the Gulf citizens. This is the main problem.

The standard is changing from year to year, and we try to keep up with these changes. We base our standard on an international standard. The main problem is implementation of the standard.

We have instituted some rules inside Jordan for quality standards regarding packaging and regarding the refrigeration of fresh produce.

I also wanted to mention that if we want to produce high-quality crops, we have to have adequate sources of water. I can produce grapes for the Jordanian people because our grapes are rain-fed. But if I am to produce a quantity of grapes that meet the European demand, I have to have more water. I can produce grapes with good taste, but small size. And European countries do not need the small size. I need water in order to increase the size.

**Ali A. El-Saied (Egypt):** This also demonstrates the value of having studies that would give us information about alternatives. If you cannot efficiently grow grapes, maybe you can focus on other things. We can combine and integrate our resources.

**Amir Heiman (Israel):** I will try to present, at least in the beginning, a broader picture, without talking about cooperation directly. Rather, I will try to explore my vision of markets today in Europe and the United States, and to show why a lone country cannot survive the competition against South and Central American countries.

If you take some of the leading Israeli exports -- citrus and avocados -- their market share in the United Kingdom and France has been shrinking over time. The explanation for this is not that the government stopped financing promotion. There are many reasons, one of which is the increasing retailing power of the supermarkets.

We can speak theoretically about many models of cooperation, one of which is to have common brands. But, first of all, we need to know what each side can contribute to the others because cooperation is not magic. Governments all around the world are involved in the marketing of agricultural products. They are involved in agriculture. Hypothetically, thinking radically, we might say that it is not beneficial for Israel to produce agricultural products because the water is too expensive. Maybe we should import all our agricultural products from Chile. It's cheaper.

Water is very expensive. Of course, we don't pay the real price of water. Water and land are very expensive. The only way to overcome this is to produce high-value products -- such as seeds and cut flowers -- and for this we need to build up some power. Let's say we have some seeds. We are competing with Monsanto, which is a giant. Nobody can compete with them at home.

But there is another aspect to cooperation. If you look at the figures of promotion for Israeli agricultural products there are more sampling activities than advertising. Some would claim this is not efficient. There are many explanations as to why this is done. One is, again, size. You cannot build a brand without quality, and consistent quality over time, and without advertising. And it is not worthwhile to advertise unless you have enough volume. So quality, marketing and brand are all connected.

**Ali A. El-Saied (Egypt):** Our four countries are all facing the same problems in the marketplace. The acceptance by Europeans of green mangoes is a problem for Egypt, for Israel, probably for Jordan. Why don't we work together on a jointly financed program, a joint venture, to promote green mangoes in Europe? And mangoes are just one example. Why don't we promote the products jointly and penetrate the market as a group? This would satisfy the new marketing environment by supplying large volumes that would attract the chain supermarkets to work with us, by enabling us to supply the market over longer periods of time, and also affording us a better competitive position against Central American or Asian countries and so on.

If Egypt finances a program for promoting green mangoes in Europe, and Israel runs another program, Jordan a third and the Palestinians a fourth, it will be too expensive. It is more feasible to finance a joint program to educate the consumer that green mangoes are also ripe. With grapes and many other items, if we run

such a promotional program together, we can build an image for the entire region. And it will be less expensive than working individually.

One of the major impediments facing Egypt and Israel -- maybe Jordan as well -- is the expensive transportation costs of air freight and sea freight and so on. Big volume is required to attract the shipping companies. And you cannot afford this big volume for export without lowering the transportation costs, so this is a dilemma. Shipping companies require enough volume to justify a shipping line, yet I cannot afford these large volumes unless they reduce the cost to a level I can afford. So it's a chicken-and-egg problem.

But if we work together, we can attract shipping companies to work with us because we will have big volumes, and we will also be able to force them to lower the cost, which will give us a better competitive position in the marketplace. This is another area of cooperation.

All of these ideas could be explored and presented in a thorough study that clearly shows the benefits of cooperation, and of pursuing our recommendations.

**Participant:** I think the four countries have a comparative advantage in that we can cultivate earlier products, during a time when the European countries and other places in the world cannot cultivate anything. We have to build on this advantage, and improve the reputation of products from this region.

In another direction, I think we have to focus on non-traditional crops, such as cut flowers and herbs. They are very high-value products, our region has good agro-climatic advantages, and we can cultivate non-traditional products for export.

**Ali A. El-Saied (Egypt):** In order to reduce your costs you have to look for innovations. You have to look for applied research, and this costs money. If you run an applied research program for improving post-harvest quality or maintaining market access that are vital items in the marketing process, it's too expensive for one country. But if you split the applied research programs in post-harvest handling and transportation logistics and market access into small specific parts for each country to handle, and then collect the results, this will benefit all four countries.

Non-traditional crops are an excellent example. We know that the citrus market is not doing well. Grapes will also be a problem soon. But there are new items. In citrus, for example, the consumers are now looking for easy-peelers, not the traditional navel oranges. We need a program on how to convert our citrus production in the region to fit the consumer needs. This requires research and trials. We could finance that jointly, and have the researchers of the individual countries work on specific items to solve this problem and to increase production of such easy-peelers.

There are also changes in potato markets. They are now looking for what are called new potatoes, and we have to solve this problem one way or another. Joint applied research could be an excellent area of cooperation. I'm talking about research in post-harvest handling and transportation and market access issues.

**Participant:** Do you mean marketing data? Any kind of information, either technical or statistical or --

**Ali A. El-Saied (Egypt):** For example, the people in Europe are looking for easy-peelers rather than regular citrus. So we need applied research to tell us how efficiently we could produce this new type of citrus and export it to Europe. How to handle those products post-harvest, for example. Post-harvest you are not improving quality, just maintaining quality.

How can we maintain this quality and produce the fruit efficiently? You do some trials storing some product at specific temperatures and humidity for a specific period of time and so on. We could work on three or four products, the Palestinians on three or four, the Israelis on another three or four, and the Jordanians on three or four, and we could combine the results later on. Financing a program for optimum post-harvest handling of 50 products by one country, you will get the same results, but at a much higher cost.

**Participant:** I think this idea is already on the ground in the region.

**Ali A. El-Saied (Egypt):** But this is introductory.

**Ahmed Al Kayali (Jordan):** In Jordan we are working on tomatoes, and we will be starting on grapes.

**Participant:** This is not a regional program. It is technology transfer. I mean that there is already regional cooperation on applied research for post-harvest and quality.

**Ali A. El-Saied (Egypt):** What I mean here is a full-cost program for produce. Our main target is to enhance our produce through this program that would be focused on exportable costs.

**Zakaria Al-Qaq:** Even now the donor countries find regional projects very appealing. So if we come up with a joint project, it would be easier for the donor countries to finance these kinds of studies. We could avoid the financial burden on each of the countries by having the donor countries give the money, and then the participants will be giving in kind, meaning experts and so on.

**Participant:** If you ask USAID to finance a post-harvest program in Egypt while running similar programs in Israel, Palestine and Jordan, it would be too expensive for them. But if they could plan programs that would run in all four of the countries, it's much more efficient.

**Amir Heiman (Israel):** For the last two years we have attempted to research the taste of the consumers for citrus grown in the desert compared to that grown in the middle of Israel. Land prices in the middle of Israel are very high. In the desert they are zero. Some experts thought that citrus grown in the desert would be less sweet, but it proved the opposite. We got about \$20,000 to send some students to conduct surveys in Nottingham and Manchester. It cost too much. We could sample only 200 people. To find a real solution, we need to sample around 5,000 people. I do not think that private companies will finance that. And Governments are not very interested in consumer research.

The only joint work that can be done is to raise this issue and say that if all the participants join together, perhaps with European assistance, we can learn more about consumers.

**Ali A. El-Saied (Egypt):** Market information is not limited to prices. It's much more than that. Doing marketing research, running promotional programs, all these are aspects of a marketing intelligence system that will be focusing on consumers -- a study of your markets. It's a very big and complicated thing and includes a lot of details. It's not as easy as just price lists.

Also, this market information could provide us with information that would help us avoid internal competition among the four countries, and could facilitate the movement of products from one country to another, depending on the weather conditions, prices and so on. For example, if I know the price of Sharon fruit in Cairo and in Tel-Aviv, I might decide to ship my produce to Cairo to sell it there and so on.

We are in the information era, and information means power. The more information we have, the more benefits we can gain. People say information is necessary for business. In my opinion, information is the business.

**Ben-David Ran (Israel):** Has anything like what you are suggesting was done in other parts of the world? Post-harvest, I understand. But for consumer tastes and so on, as I know the market from the point of view of inspection of exports from Israel, the supermarket chains do this research themselves. They know what the people want in Manchester or wherever else, and they dictate to you what products they want. They can tell you they want superior table grapes. You can do research about consumer tastes, but in the end, it's the supermarket chains that buy the products, and they will tell you exactly what they want.

But from my point of view, I don't mean only cooperation in exporting from this region to other parts of the world. We must also think about commerce among these four countries -- and I hope, in the future, also Syria and Lebanon and other Mediterranean countries. If you want to sell food from your country to Tel-Aviv, then I want to be speaking the same language. When you call something class 1, I must know what you mean. And not only with fresh produce, but propagation materials as well. I am sure that a young citrus tree in Egypt costs much less than in Israel, and in the future I think we are going to be importing this material from you, or from Jordan. So we have to establish a common language for commerce between us.

And we are also looking not only at the populations of the EC countries. What about our domestic standards? We do not want to expose our countries to imports from other countries. Let's say Central America will send us table grapes in the off-season. Do we want to import everything, or do we want to stop some lower-quality products at entry?

**Participant:** The dominance of the supermarket chains means that if we do not work together, we will not survive. They will not work with Israel for 5,000 or 10,000 tons of grapes. They are looking for hundreds of thousands of tons of grapes. We cannot afford these quantities unless we work very closely together and act as a group in the marketplace.

**Ben-David Ran (Israel):** Is there another region in the world where there is such marketing cooperation between countries? Because sometimes, for post-harvest, all you have to do is open a book and look up the temperature and sensitivity and so on.

**Participant:** In other areas, the situation is different. Chile exports 5 million boxes of grapes each year. Their production capability is much higher.

**Ben-David Ran (Israel):** This is one country and one interest. But are there other parts of the world where there are regional organizations to do such marketing?

**Participant:** Yes. Spain and Portugal, for example. I think also between Cyprus and Italy there is coordination and cooperation in marketing. It's informal, but it has taken place.

**Ben-David Ran (Israel):** Because in marketing there is a lot of competition between companies.

**Marketing Working Group.  
Forwarding, Packaging and Quality Standards - Session II**

**Ben-David Ran (Israel):** I am going to talk about policy and standards here in Israel: what we mean by standards and what we think they must include, the process, how we arrive at standards, some samples and some ideas about implementation.

Why do we need quality standards for fresh fruits and vegetables?

First, to provide a common language for all elements along the marketing chain -- market information about prices and quantities and so on. If we don't talk quality, if

we don't know if it's class 1 or class 2 and what that means, how can we compare the price of tomatoes in Amman with the price of tomatoes in Cairo?

Second, to help growers and handlers do a better job of preparing and labeling fresh produce.

The third reason we need quality standards for fresh fruits and vegetables is to provide a basis for incentive payments to reward better quality. Here you must know what the classes and qualities are. And of course, you cannot deal with standards by forcing people. You can do it only if people understand. If a grower does not recognize that he will profit from it, he will not believe in it and nothing will happen. He must understand that usually -- not always -- but usually he will get a better price for better quality.

**Mustafa Salma (Palestine):**  
growers to follow the standards?

**Ben-David Ran (Israel):**

**Mustafa Salma (Palestine):** We have to guide them and advise them that if they follow the standards, they will get a better price. And as a country that wants to protect its good name, its logo, we need regulations and enforcement so exporters will adhere to the standards.

**Ben-David Ran (Israel):** Maybe I was not clear enough. In Israel, we have regulations only for exports. What I'm talking about now is domestic market standards, for the grower. We know they have to do work on standards for the domestic market as well, not only for exports. For exports we already have minimum standards. Most of them are irrelevant because most, if not all, Israeli exporters work by the requirements of the supermarket chains in the destination countries, which have much higher quality standards than our own national export standards, and which are equal to European Community (EC) standards. But they are still minimal.

Reason number 4. Good quality growers can survive and do better business with quality standards, while growers who are not so good will disappear from the market when they have to meet those quality standards. We are trying to show

our growers some models, by means of the vegetable and fruit boards, to demonstrate this.

Reason number 5. Quality standards are a basis for market reporting. Prices must be based on products of comparable quality. Otherwise, you don't know what you are talking about.

I think number 6, food safety, has not yet been written into the requirements. This has to be dealt with by the Ministry of Agriculture or the Ministry of Health, but you may not be able to produce without including food safety and all its aspects in the standards.

**Ahmed Al Kayali (Jordan):** It could be contamination.

**Mustafa Salma (Palestine):** Free of disease.

**Ben-David Ran (Israel):** Not only. For example, for supermarket chains in the UK, you cannot use a packinghouse that does not have a plastic sleeve for the lights so that if they break, no pieces of glass will fall into the carton.

**Ali A. El-Saied (Egypt):** Or any foreign materials.

**Ben-David Ran (Israel):** This is also food safety. It's not chemicals, but it's still food safety. Workers must wear hats and gloves. Like in restaurants, they don't want to find hair in the food.

**Mustafa Salma (Palestine):** But it should be followed up with regulations or minimum requirements.

**Ben-David Ran (Israel):** Yes. But in stages, not immediately and not all at once. It depends at what level you are starting. Step by step, but you have to know your aim and timeframe, when you want to get there.

Number seven is consumer protection. The consumer is the most important in this chain. They are the ones who pay for the product and they are ones we must satisfy.

Number eight is environmental protection. Many of those supermarket chains are very interested in knowing that when you treated your product, you still kept the environment free from damage. And if you are not going to be following GAP -- Good Agricultural Practices -- they don't want you. This is going to become a regulation in the EC countries in the next few years.

**Ali A. El-Saied (Egypt):** September of 2001. In one year we will have to follow the GAP system.

**Ben-David Ran (Israel):** I don't know whether it will be enforced immediately, but in the future you will not be allowed to export to the EC countries unless you meet the GAP requirements.

**Ali A. El-Saied (Egypt):** They will not enforce it, but they will buy only from growers with GAP certificates. So other people will automatically disappear.

**Ben-David Ran (Israel):** That's right. GAP includes not only environmental protection, but all the other parameters as well. But environmental protection is a very modern way of thinking now, and you cannot think of standards without including it.

National standards prevent the import of lower-quality products. In Israel, since we don't have any national standards, we are not allowed to stop any products at the border intended for import into Israel, except for phytosanitary reasons. But if you have your own national standards, then you are allowed, by GATT agreement, to do an inspection. If it doesn't meet your requirements, you can reject it.

**Mustafa Salma (Palestine):** Is there a relationship between food security and quality standards?

**Abraham Melamed (Israel):** It's the same thing.

**Mustafa Salma (Palestine):** I don't want shortages. There is a difference, of course, between safety and security. Food security means products should be available year-round.

**Ben-David Ran (Israel):** When I talk about quality standards I am not concerned with the commercial aspects. I am dealing with quality. It is a commercial issue whether there is an opportunity to supply a product or not.

**Amir Heiman (Israel):** This is a professional term. When you say food security you mean ensuring supplies so that everybody will have the product available. When you talk about food safety, you are talking about quality.

**Ben-David Ran (Israel):** Let's say someone wants table grapes in January. It is not possible in this area unless you import them. So first there is the phytosanitary issue, whether it's allowed in and from where. After a long pest risk analysis that lasted three or four years, this was the first year that we imported table grapes from South Africa.

**Mustafa Salma (Palestine):** Then national standards cannot prevent lower-quality products from other countries being imported?

**Ben-David Ran (Israel):** Of course they will prevent them. If there is shortages now of tomatoes in this area, and you want to import into Israel a vessel of class 1 tomatoes coming from Holland that are lower than our requirements, we reject them as class 1. If there's a shortage, maybe you can bring it in, but only as class 2.

**Amir Heiman (Israel):** Salma is raising a different issue. There is a concern about supplying food for hungry people. This is called food security, ensuring that people will not suffer hunger. One way is to supply cheap food, low-quality food, to those consumers who cannot afford the higher-quality, higher-priced food. This is an issue that should perhaps be mentioned. Countries can say they don't want to deal with it, but it should be mentioned.

**Ben-David Ran (Israel):** The question is whether this area is interested. Do we have such hungry people that we want to import any kind of quality? When you introduce low-quality products into your marketplace, the prices of the good quality produce will also go down. And we have to serve not only the consumer, but also the producer. We serve them all together.

**Abraham Melamed (Israel):** According to the new WTO agreements, national standards can officially be used as non-tariff barriers. I think the Americans are

using it the most in their quality standards that are set by their marketing boards. So national quality standards can be used as non-tariff barriers to entry.

**Amir Heiman (Israel):** The French are denying the import of meat from the United Kingdom because of mad cow disease. Last week the French papers were saying that they don't care. Let the English people eat their own meat. They can suffer. They are not allowing it to be imported into France. So it is a barrier.

**Ben-David Ran (Israel):** Genetically modified organisms (GMO) are also a big discussion now with the United States.

**Amir Heiman (Israel):** Even between countries in Europe.

**Ali A. El-Saied (Egypt):** It's a commercial thing. The Americans are running a big genetic modification program. The Europeans are trying to build up their own industry first. They are happy to let the Americans compete and dominate the market in Europe because the Americans are more advanced in this area. It's a commercial thing.

**Ben-David Ran (Israel):** As a consumer, I'm not yet sure whether I want to buy something GMO or not. I haven't yet decided. But for sure I want to know. It's my right to know whether I am buying a GMO product so that I can decide.

**Ali A. El-Saied (Egypt):** This is what the Europeans said. You must label it as a genetically modified product. Actually, these products should be distributed through a separate marketing chain so the consumer will know that he is dealing with GMO products.

**Ben-David Ran (Israel):** The next topic is quality components, and I would like to offer some additional points. One is marking. At all stages, even on the shelf -- according to a law that is coming into force in the next few months I think, and which everyone who handles merchandise must obey -- a product must be marked with country of origin. These are tomatoes from Jordan, and the apples are from France or Spain or the United States. The consumer wants to know where it comes from before deciding on a purchase.

Right now, in Israel, there is no information on the shelf. Nothing. Only the price, sometimes. Even the price is not always marked. I want to know the country of

origin, the packinghouse, the quality, whether it's class 1 or class 2 and so on. This is also one of the components of the quality.

Another is appearance -- size; weight; shape; color; internal and external defects, morphological, physical and mechanical, physiological, pathological and entomological defects which influence the quality of the product.

Another component is texture. In Israel, right now we don't deal with texture in the quality of our products, but I think it is a very important feature. Later on I'll explain some things about the politics surrounding it. Every side wants his opinion to be accepted, and there are differences within Israel about some products. Of course, in a larger region, there may be many more problems. Maybe the texture of the green mango in Egypt is different -- better or worse -- than that of the mango in Israel or in the Palestinian Authority or in Jordan.

It's easier to talk about external parameters. Talking about texture -- firmness, crispness, juiciness -- is much more difficult. But we must deal with it or we will not be able to compete with our competitors.

**Mustafa Salma (Palestine):** Why is it difficult to determine or check the texture?

**Ben-David Ran (Israel):**

level. Let's talk about apples. You want the grower to be with you. You want as wide an understanding as possible. Let's take color, for example. Let's say that apples from the Golan Heights are much redder than from the Galilee. In one area they say they want redder apples as the standard, but the other areas disagree. We can never attain this color. We want this other color, and so on. So it's a much harder issue.

Texture for example, or sugar content. Let's say, for table grapes, the grower knows that the consumer wants 16 percent sugar content. But he also knows that even if he harvests them at 14 percent, he'll still get much higher prices because it will be earlier in the season. But then the standards will not allow it because the consumer wants higher internal quality.

So where do you draw the line? It's very hard to decide, and it's very difficult to  
14 percent sugar content I can get  
double the price of those which come two weeks later with 16 percent. So who

are you to tell me what's good for the consumer? He's still willing to pay double the

I myself don't have an answer to that. Of course, grapes are better with a 16 percent sugar content, but there is also a big market for unripe foods. In Israel you pay very high prices for unripe peaches. And you say you cannot cheat the consumer twice, but every year they come back and buy them again.

So what's the right thing to do? I don't know, because we have to service the whole chain of production -- the growers, the packinghouse, and the consumer. It's very difficult and complicated dealing with these issues.

**Mustafa Salma (Palestine):** It depends on the demand. I can pick lower quality green fruit if I pick according to demand, and not according to quality standards. But then, from a technical point of view, I cannot preserve these fruits for a long time, or maintain their quality.

**Ben-David Ran (Israel):** Post-harvest.

**Mustafa Salma (Palestine):** However, in this case I can get a higher price for lower quality.

**Ben-David Ran (Israel):** National standards must be minimal and must be under a very wide umbrella with the agreement of all parties -- the grower, the consumer and so on. Quality levels may climb very high, but that will not be the minimum requirement of the national standard because, in the national standard, you must satisfy a very wide range of people. Higher quality can be pursued voluntarily, but not by the requirements of the national standard. National standards, even EC quality standards, are minimum requirements.

**Ahmed Al Kayali (Jordan):** From what I know about the WTO agreement, if you want to apply a standard to imported products, you have to apply the same standard to your local products. So what can you do? If you want to import products from outside and you have higher standards, you cannot go under the WTO.

**Ben-David Ran (Israel):** I will answer this question a little later in my presentation.

**Amir Heiman (Israel):** In most of the countries of the world you can sell any quality standard as long as you have proper labels. As long as you don't cheat and as long as you don't sell something that is damaging to one's health, it is allowed. You are saying -- and I agree -- that we can think about the possibility of developing at least two markets, high quality and low quality. One of the requirements for doing that is proper labeling.

It's not that it's black or white. All the products can be high quality or all the high products can be low quality.

**Ben-David Ran (Israel):** Flavor. We're talking about sweetness, sugar content, sourness, acidity, bitterness and aroma. They are not written in the dry standards. The producers have to choose what they want to include.

Now I want to talk about how we are establishing a new national standard here in Israel for the domestic market. I think it's approximately the same model all over, more or less.

First you must decide with which specific product you want to deal. Maybe you're afraid of a large quantity of import of some particular product. And there are many other reasons. But first you have to decide what product you want.

Then you have to establish a legal basis for the product's regulation. Otherwise you can do nothing outside. Later you appoint representatives for the product from the relevant production boards.

Now I want to try to answer your question. You choose representatives because you cannot go to every grower and ask what he wants. There are hundreds of thousands of growers. They have a committee representing all the growers, and you deal with them. What are the parameters they think influence quality?

You can suggest to them, for example, that they are threatened by the import of apples from the States. We get apples from the States that are very old, and the internal quality is not as good as those produced here in Israel. So I suggest dealing with internal quality.

I cannot force them to do it. I just suggest it to them because they will profit from it because the people will recognize, when the origin country is the United States, that although the outside looks more attractive, the taste of the Israeli apples is better. And they prefer the good taste. In this way you can reject the import of some products -- apples in this case. If you determine some internal qualities and the imported products don't meet your requirements, you can reject them. Sugar content is another example.

But I want the growers to decide by themselves. I don't want to do it by force because, as I said in the beginning, it depends where you start. In Israel we are only just starting in this area, and we're starting from zero, maybe even from minus. We have a very long way to go, and you cannot go immediately to a hundred from minus or from zero. It has to be step by step.

**Ali A. El-Saied (Egypt):**

quality standards determine that table grapes should have not less than 16 per cent sugar content, and at the same time you're importing grapes from Chile and the import requirement is that the percentage will not be less than 18, this is not allowed under WTO. You have to apply the same standard for domestic and imported crops.

We are also suffering from something else in Egypt. The Europeans marketed potatoes contaminated with brown root within Europe, but did not allow potatoes with brown root to come from outside the EU. We complained to the WTO. You cannot use phytosanitary issues to prevent commodities from entering your market unless you have the same policy domestically.

**Ben-David Ran (Israel):**

they want more protection, choose more restrictions.

**Ali A. El-Saied (Egypt):** It will restrict your local market, your capability of marketing your products domestically.

**Ben-David Ran (Israel):** In Israel it's very complicated. Up until the last few years we were not exposed to exports. The producers were not used to competition. They did whatever they wanted. Now that they're starting to be exposed to competition from outside, they must improve. We are starting with

minimum requirements. I'm sure in the future there will be more parameters in the minimum requirements of our national standard. It's just a matter of time.

We determine the relevant parameters of product quality, including a definition of the parameters and a parameters color chart from best to worst -- about one to eight photographs each. The law is very dry, and sometimes there are many different interpretations. In order to be able to train your staff, the packinghouses, the dealers, the commercial people and so on, you have to have very good interpretation. I think color charts are the best way to go.

**Ali A. El-Saied (Egypt):** There is also a small tool that measures the color. Post-harvest people have tools to measure everything. There is a tool to measure the exact sugar content. They have tools that measure color and give you a number corresponding to a precise color. What I see as green may be a little darker or a little lighter than what you see as green. In order to avoid those complications, rather than using charts, we could use those tools.

**Ben-David Ran (Israel):** I don't know about this tool. I'm not sure it gives you surface, how much the color covers the fruit.

**Ali A. El-Saied (Egypt):** It does. There is also a small tool that measures texture. And there is also a small tool that measures color and whether it's consistent or not, and to what degree.

**Ben-David Ran (Israel):** My color charts and photographic samples illustrate the parameters. In the end, you have an album of standards plus text for the different bodies.

This is how we are building new standards in Israel for the domestic market. Right now we have about six or seven standards for fruit and the same quantity for vegetables. Now I'll try to explain how we are thinking about implementing these standards in the domestic market.

**Ali A. El-Saied (Egypt):** Are you including variety standards? Every standard should be consistent with variety characteristics -- for example, not table grapes in general, but Thompson seedless table grapes.

**Ben-David Ran (Israel):** Of course. This is now a presentation of Shamouti oranges. If you ask about mangoes, I can show you Sharon fruit. These are what we call green-crown Shamouti oranges.

**Mustafa Salma (Palestine):** First you said, for establishing standards, we have to determine the specific product or products. What are the criteria for choosing these products?

**Ben-David Ran (Israel):** For example, maybe the fruit board thinks they are going to be exposed to a big import of some particular product in the next few years. So they decide to deal with that in order to play by the GATT agreement and reject such a product with low quality from penetrating into Israel.

**Mustafa Salma (Palestine):** In Israel, the area cultivated by citrus is decreasing. Citrus is more costly than some other produce because of the high cost of water. We can replace this product with a non-traditional product and make a standard for these products instead of producing something that costs a lot.

For example, in the West Bank, the cost of production for many items is higher than that in Israel because of the water and pesticides and so on. It turns out that although we have a higher cost of production, we have a lower quality product than in Israel.

**Ben-David Ran (Israel):** Now you're talking about policy. This is not my area. Those who are directly interested -- the growers, the boards -- have to deal with that. They know better than I do the things that interfere with them, that influence the market and so on. This is not my business. I just give them my professional point of view about what must or must not be included in the standards, and suggest to them how to train the staff and so on. But I am not involved in policy.

**Mustafa Salma (Palestine):** If you have only a little money and you can buy either roses or bread, which do you prefer?

**Ben-David Ran (Israel):** Bread, of course. But how is this connected?

**Mustafa Salma (Palestine):** We don't have money, and you want us to convince our growers to improve quality and add more and more costs. How can I compete?

**Ben-David Ran (Israel):** You must convince your growers that if they want to survive, they must advance. Otherwise they will disappear. This is the trend now. Consumers have higher requirements. The grower must understand this and be prepared a few years before it happens. Otherwise that grower will disappear.

If he does not use a nice, clean, modern packinghouse, I'm sure that that his

over older and less hygienic packinghouses. So you must prepare the grower.

Someone importing tomatoes from Holland, for example, will show you pictures where they were packed and grown, a clean place with a very nice atmosphere and so on. Customers who have the money to pay for good products will prefer GAP conditions -- Good Agricultural Practices -- and then your grower will disappear. He will not survive. You must prepare him now that only good growers will be able to survive, even if you are lacking money.

**Mustafa Salma (Palestine):** As regional countries we have a mutual interest. There are also many benefits to be exchanged between us. I think it's a good idea to protect our interests and to become a big power in relation to the outside world. If we want to make regional standards, first Jordan, Egypt, Israel, and Palestine have to have their own standards. Then we can establish regional standards. And we can cooperate on different aspects. It's difficult to improve exports as only one country. You can improve more with Egypt and with Jordan and with the Palestinians.

**Ben-David Ran (Israel):** That's what I am trying to offer now.

**Mustafa Salma (Palestine):** You said it's policy. It's not policy. If we have the same benefits and you want to strengthen your exports or your trade, we have to cooperate. For example, you have herbs in Israel in greenhouses in the Jordan Valley. They require a lot of water. To increase the volume, we have many advantages we could share. We have the same climate. Why not increase the area on the other side -- Palestine or Jordan, with non-traditional crops? Cooperation in this sense could mean increasing water, increasing technology transfer and so on, not only establishing standards and post-harvest technology.

**Ben-David Ran (Israel):** My topic is quality standards. Maybe others will be addressing other forms of cooperation. The moment we have our national standards, these four countries -- and maybe others in the future, Syria, Lebanon or others -- can be like EC countries. We can have an open market among us. You export to Israel, we import from Palestine. We send to Egypt and so on. And we need some rules for this process.

I am not comparing this region against other regions of the world right now. I am talking about the commerce that is going to develop in this area among these countries, like it has in the EC countries. They have arrangements among

cucumbers to Israel that do not meet our national standard -- which could also be GAP. Israel competitors could show, for example, that the packinghouse of the grower in the Palestinian Authority does not meet our national standard. In this case, Israel would reject those cucumbers at the border. Or, if it is written on products that the country of origin is Palestine, maybe the consumer will not want to buy it, or maybe only at a lower price.

This is what I am trying to say. We have to make some arrangements among us, not this region against other regions, but this region within itself. That is my point of view.

**Mustafa Salma (Palestine):** As I understand it, you want a mechanism to facilitate dealings between the four countries.

**Ben-David Ran (Israel):** To the benefit of the nations' growers, consumers, and us all.

**Mustafa Salma (Palestine):** But in fact, if you look at the WTO agreement, you will find that, in a few years, you will not be able to prevent the rest of the world from sending their products into your country or your region. There will be free flow or free movement of products. So I think our main focus should be on protecting ourselves before benefiting ourselves because, in the future, if they have higher quality with lower costs than our country, we will not be able to develop ourselves.

**Ben-David Ran (Israel):** These quality standards protect our growers because they are going to be exposed to very big imports. The same will be true in each of

your countries. I am trying to prepare them for that stage, which is coming very soon. I am going to tell them that they must have standards. They must improve their production because they are exposed to competition from outside, and they must do better work in order to solve these problems.

**Ahmed Al Kayali (Jordan):** You have to have your own standard in order to apply standards on imported products.

**Ben-David Ran (Israel):** Of course. But this is not the only issue. We care about the consumers and the environment and food safety and so on. I want to know where this product came from, who the packer was, what variety of fruit it is, the country of origin, the size. All of this marking is part of the standard.

So this is the presentation of the parameters we think are important. If you have a table of reference for Shamouti Class 1 you can see, for each parameter, what is allowed to be packed and what is not allowed in that class. Here are similar tables for class 2.

**Ahmed Al Kayali (Jordan):** Do you have extra classes?

**Ben-David Ran (Israel):** On some products, not all. For onions and potatoes we

Color charts help us to determine what colors are allowed to be packed in class 1. Shape. Skin texture. You can see, for each parameter, what is allowed and what is not allowed. We use these to train our staff. I can focus on a defect and show the staff where to concentrate. This technique helps us a lot with training the staff, the grower, the packinghouses and so on.

These are the tools we use for harmonization between the producers and the supermarket and all those who deal with these products. We also use them to train our staff and the packinghouse staff. All of this can be printed from a CD-ROM on high-quality paper in a simple printer, and you can display them in every packinghouse, and for your staff. If, during the season, some other parameter suddenly appears and you want to focus your staff on it, you can print it and put it on the wall, and everybody can easily see what is allowed and what is not allowed.

Let's talk about the mango. This is the typical shape for Kent. Of course, after we

her

picture between 2 and 3

**Mustafa Salma (Palestine):** This tolerance of defects, are they defects from before, during or after harvesting?

**Ben-David Ran (Israel):** It doesn't matter. As an inspector of quality, when I come to take my sample and decide whether it meets the requirements or not, it doesn't matter when the damage was caused. All I know is what caused the problem and that it must be rejected.

**Mustafa Salma (Palestine):** From a marketing point of view it is rejected because it is infected with disease or there is a defect. But is it necessary to issue phytosanitary for this issue?

**Ben-David Ran (Israel):** When I am exporting it? This is the damage caused by the insect. The insect itself is not allowed to remain in the food. I have no tolerance for the insects, but for the damage, of course I must have some tolerance. It depends what category of quality it is. There are tolerance levels indicating how much of this damage is allowed in each quality category in order to be packed.

**Mustafa Salma (Palestine):** But as quality inspectors, we want to facilitate, not to complicate the procedures. I don't want one quality service inspector to inspect for standards and then another one specialized in protection and phytosanitary to inspect for diseases.

**Ben-David Ran (Israel):** Why not?

**Mustafa Salma (Palestine):** It will be too complicated.

**Ben-David Ran (Israel):** We are actually doing that every day. To send two people, one for phytosanitary and another for quality control, is very expensive. Can you pay all these expenses?

**Ahmed Al Kayali (Jordan):** Can it be the same inspector?

**Ben-David Ran (Israel):** Here in Israel we usually have the same inspector do both jobs.

**Ahmed Al Kayali (Jordan):** Because phytosanitary is a quality issue.

**Abraham Melamed (Israel):** In the United States, it's the same inspector.

**Ben-David Ran (Israel):** In South Africa there are two authorities doing it, two organizations. One is a governmental, semi-private organization that deals with phytosanitary, quality control and with all kinds of treatments and so on.

**Mustafa Salma (Palestine):** I think the responsibility for inspection services does not fall under plant protection, from a marketing point of view. It should be in the agricultural marketing department.

**Ben-David Ran (Israel):** In Israel, we have minimum requirements. Those who want to export at higher levels, it's okay. It's open. You do whatever you want. But you must export at the minimum requirements.

**Ahmed Al Kayali (Jordan):** In Israel, do you have inspectors who inspect products for export?

**Ben-David Ran (Israel):** According to our law, we must inspect fresh products for export. For import, we are only doing phytosanitary inspections, not quality, because we don't yet have our own national standards. When we do -- and we're very close with some products -- we will inspect for those also.

**Mustafa Salma (Palestine):** Quality standards inspections will not be the responsibility of the Ministry of Agriculture or Plant Protection. It will be for the Minister of Commerce.

**Ben-David Ran (Israel):** Israel has a different structure. It falls within the Ministry of Agriculture's responsibility.

**Mustafa Salma (Palestine):** Standards are not a science. It doesn't require specialists in agriculture or agronomy.

**Abraham Melamed (Israel):** Someone who is not an agronomist really cannot handle the problem of fresh produce quality. You have to know agriculture and you have to know the physiology and chemistry of the fruit.

**Mustafa Salma (Palestine):** There is a department for quality inspection services in the Ministry of Commerce.

**Ben-David Ran (Israel):** Every country has its own structure. In Israel, it's the Ministry of Agriculture.

**Mustafa Salma (Palestine):** I trained in Cyprus. Their quality inspection services are in the Ministry of Commerce, and they have agronomists specializing in plant protection to issue the phytosanitary and so on.

**Abraham Melamed (Israel):** It originally came from the British tradition. In the British tradition, quality was the job of the Ministry of Trade and Industry. So Israeli law, which is derived from British law, really gives the authority to the Ministry of Trade and Industry. But the Ministry delegates the authority to the Ministry of Agriculture. That's the way the Israeli legal structure works.

**Amir Heiman (Israel):** Just to complicate things further, one Ministry sets the quality for exports while another: the Ministry of Agriculture is trying to impose higher quality standards. And even in the same department or the same ministry, there might be a situation in which two departments will not agree about the standards. The situation is quite complicated. It's not that somebody sets a standard and that's it.

**Mustafa Salma (Palestine):** In the future, when we have cooperation on the regional level, is it assumed that we will have uniform structures responsible for quality services? We want phytosanitary to be the same in all our countries.

**Ben-David Ran (Israel):** Yes. That's what I mean. We have to harmonize. But we don't have to harmonize the structure of the organizations. Every country decides who represents its country in a certain issue. As long as that organization does professional work, that's good enough for me.

We imported some table grapes from South Africa. We have a protocol with them for cold treatment in order to eradicate fruit flies. The same as for exporting to the

Far East -- Japan and South Korea. We have agreements between the countries about cold treatment for eradication of fruit flies. And even though a private organization does this job in South Africa, as long it is authorized by the government and by the authorities, and is going by our protocol, it's good enough for us. We don't care what the internal structure is in South Africa, as long as it is authorized by the government and doing a good job according to our protocol. The organization is also allowed to sign international documents.

**Mustafa Salma (Palestine):**

complicate the situation. The one who does this job is a specialist, an agronomist. I don't need to duplicate functions between plant protection and quality inspection services. I don't need to call one of the plant protection phytosanitary specialists for a quality certificate. We need one structure issuing certificates from the main source -- the plant protection department in our Ministry of Agriculture. We currently have both the plant protection department and the marketing department, and we are engaged in a hot discussion about who will issue the phytosanitary certificate.

The main goal is not to complicate this for the farmers or the producers. I want to facilitate this as much as possible. One department has responsibility for quality inspection, for phytosanitary protection and marketing services in one department, and then another department for another function. These issues are quality standards. The plant protection department's responsibility is to protect the country from outside insects or disease, not to promote exports.

**Ben-David Ran (Israel):** You are absolutely wrong. I'm sorry. When you have a bilateral agreement with another country that wants your professional inspection and wants you to monitor for some insects, they want the plant protection to help in finding areas where these insects do not exist. Of course, this serves the export of this country. It serves internal needs and external needs. This is our structure. Plant protection is not only for export. Of course it is also internal.

**Mustafa Salma (Palestine):** You're responsible for everything from seed to consumer.

**Ben-David Ran (Israel):** This is our structure. This is the way we are doing it in Israel. The same organization, PPIS, is responsible for all of these issues -- for seed quality, for the labs, and so on.

**Ahmed Al Kayali (Jordan):** In Jordan we have an agricultural marketing organization that arranges these things. This depends on the country. It's structural. Each country should solve this problem independently.

**Ben-David Ran (Israel):** I agree.

**Mustafa Salma (Palestine):** If the quality services or quality inspection services are in the department in the Ministry of Agriculture, and you want to import fruit from our country, you need phytosanitary. If we issue a phytosanitary certificate out of quality inspection services and not out of plant protection, will you accept it?

**Ben-David Ran (Israel):** I'm not allowed to check who signed your documents. If you're a country and you sign your document, I accept it as long as I'm sure the work you did is good enough. As a country we decide who our workers are, who does the work, and if the work the inspectors did is not good enough and there are problems with a product, then we will discuss it and see where we must improve. And then they will double-check after our check. Okay. That's their right. But we cannot interfere in another country's affairs.

**Mustafa Salma (Palestine):** As I understand it, it is not imperative to issue this certificate. But it should be official from the Ministry, either plant protection or quality inspection.

**Ben-David Ran (Israel):** It will come here and I will assess it professionally. If I see that you signed on this document and you are not professional enough, I will deal with you about it. I'll tell you I have some problems with your product even though you signed the certificate, but I cannot tell an independent country what to do.

**Mustafa Salma (Palestine):** This is not covered by international law?

**Abraham Melamed (Israel):** No. This is all based on bilateral agreements between countries. If Palestine signs a bilateral agreement with Israel, the agreement will specify who is authorized to sign the inspection document.

**Ben-David Ran (Israel):** I wanted to talk a little about implementation in the domestic market, but I don't think we have enough time. We really believe in a

quality assurance system in which we authorize the bodies to do the inspection by themselves - New Zealand and Australia are already doing this - under our monitoring. We are not going to do a traditional inspection, but we are going to authorize them to do the inspection by themselves according to an agreement we have between us. They must recognize where the critical points in the production chain are, do the inspection, and fill out documents about the samples and what they did in each case.

**Ahmed Al Kayali (Jordan):** Do you supervise their application of the standards from time to time?

**Ben-David Ran (Israel):** Of course. But we are still dealing only with export. In the coming year we will also begin working with the domestic market.

In Israel, with regard to implementation, because of budgetary and other problems, we believe in a quality assurance system in which authorized companies do the inspection by themselves under a certain agreement. They have to report their inspection procedures to us, from production processes to post-harvest and so on. They identify critical issues. Then they tell us their protocol for conducting the inspection at each point, and how they will deal with any problems in the inspection. We have already begun this with some companies, and we are monitoring their manuals.

We believe in Israel that traditional inspections have become irrelevant. In the future, quality assurance systems, such as in New Zealand and Australia, will be the right and proper way to go.

**Ali A. El-Saied (Egypt):** The problem with HASAP is that they don't give you a certificate. They just monitor your process. The growers are confused because they need a certificate. In HASAP there is no certificate, only an inspection that you follow exactly.

**Ben-David Ran (Israel):** The certificate is that you appear on the shelf. If you are not working with HASAP protocol, then you are not allowed on some supermarket chain shelves. This is the certificate.

**Ali A. El-Saied (Egypt):** They need a certificate to hang in their office saying this factory or this farm followed this specific rule. We did some HASAP training

programs in Egypt and it was confusing for the growers and exporters, that there is no harmonizing procedure to apply HASAP for different types of products and industries and so on.

**Ben-David Ran (Israel):** I agree. But those bodies in Israel which we authorized and whose protocol we accepted, we give them our certificate and they do the inspection by themselves. They have a green light at the terminals and we only monitor the process by a certain manual. The Ministry gives the certificate.

**Mustafa Salma (Palestine):** I think we have to harmonize the structure. Where is the post-harvest desk in Israel? Also in plant protection?

**Ben-David Ran (Israel):** No.

**Mustafa Salma (Palestine):** You separate quality standards from post-harvest?

**Ben-David Ran (Israel):** Plant protection services deals only with legal issues. Post-harvest issues are not part of the law. It's not determined by law at what temperature you must keep a certain product in cold storage. Therefore, we don't deal with it.

**Mustafa Salma (Palestine):** But we cannot separate post-harvest from quality standards. The technical specification is a major part of post-harvest.

**Ben-David Ran (Israel):** There are hundreds of ways to store apples, and I am not the right address to tell the packinghouses how to do that.

**Mustafa Salma (Palestine):** But if I want to export my products long distances -- to Britain, for example -- from the marketing point of view, if we pick tomatoes at a green color stage, we can benefit in that, by the time they reach the destination point, they will be the orange or yellow-orange color that the standard demands.

**Ben-David Ran (Israel):** No. You're wrong. I'll tell you why. The ripeness of the tomato depends on the color at the time you harvested it. If you picked it when it was too green, then it will not mature and ripen enough.

**Mustafa Salma (Palestine):** This is just an example.

**Ben-David Ran (Israel):** This is very complicated. I don't know what the internal quality of a tomato is -- taste, texture, sugar content. If you decide on the maturity of a tomato, its internal quality, okay. But since it is not in the minimum requirement, I don't deal with it.

**Mustafa Salma (Palestine):** You mentioned texture and firmness and so on as standards.

**Ben-David Ran (Israel):** I said what must be included in some stage in the future. Not yet.

**Mustafa Salma (Palestine):** In the future. But it's really post-harvest.

**Ben-David Ran (Israel):** But minimum requirements.

**Mustafa Salma (Palestine):** I agree. But actually this is post-harvest. It's not only quality standards.

**Ben-David Ran (Israel):** So it was a misunderstanding. We can deal with this. But I don't deal with cold storage and so on. If something is not logical -- like wanting to send table grapes to Europe in July in an un-refrigerated container -- I will tell you it's not allowed. But I don't care whether you put it in a temperature of zero or plus 2 degrees Centigrade.

#### **Heads of Delegations Working Group**

**Dr. Gershon Baskin (IPCRI):** We thought of having a session of delegation heads so we wouldn't be dealing just with the technical aspects of these issues. Here we have an opportunity to talk more in general about wider possibilities for cooperation that might go beyond the specific questions of standards.

With regard to the question of standards, and regardless of whatever comes out of this conference, the question is also relevant to the heads of the delegations as to what should go back to the Ministries or to the Ministers about what happened here and how to implement whatever recommendations are made.

**Sayed Abd El-Hafez (Egypt):** I think it is common, when participating in such conferences, to report back to our Minister or our department about the results of

the workshop and the recommendations, and how to disseminate all this information to our institutions. It's a matter of feedback.

**Mohid Ali Rahahela (Jordan):** I think this conference is different from the others. If we recommend something, each of the Ministries of the four countries is responsible for its implementation.

**Dr. Gershon Baskin (IPCRI):** We all know the political realities and the political problems. The question is, being that there is already a precedent for the highest level of cooperation in agricultural, much more advanced than any of the other Ministries; can more progress be made in cooperation in agriculture even considering the political realities?

**Participant:** That's right. For example, the initiative to combat desertification.

**Mohamed Abo Soliman (Egypt):** If we are discussing implementation, no country alone can solve this problem. We must work together in order to solve it. Each country will need to hold a workshop about implementation, and after three or six months, the four countries will meet again and bring possibilities for implementation from each country. In other words, it is necessary to have joint meetings and mutual activities.

**Saamer Titi (Palestine):** First of all, this is not the first effort at cooperation. We have had cooperation with the Israelis and Egypt, and also between Syria, Lebanon, Jordan and Palestine. We are also cooperating with the Peres Center for Peace. In each project, the activities are implemented according to the available facilities. For example, sometimes we go to Israel for lectures. Other times we bring lecturers to Palestine. It is the same with Egypt and Jordan. Sometimes it depends on budget.

**Dr. Gershon Baskin (IPCRI):** There are two approaches we can take. The one being used now is the bottom-up approach. People originate projects. There are funders and donors. And we can identify a large range of projects that involve regional cooperation.

The other approach is the top-down approach. This is the one that maybe we should talk about because it means identifying strategy for regional cooperation. Right now it's spontaneous, almost arbitrary. But that's not strategy.

The question is, can the four Ministries of Agriculture talk about creating a strategy for regional cooperation that involves longer-term planning, the kind of planning that went into creating the European Market in its various stages? Can we use agriculture as a springboard for regional cooperation?

**Mohid Ali Rahahela (Jordan):** Is our goal just cooperation, or to come out of the seminar with a project to propose to the EU? For coordination, we have joint agricultural committees. We need a first draft to go to our Ministers that IPCRI will prepare.

After that, in the implementation stage, we need coordination of all the working bodies, not only among the four countries, but within each country as well. We need representatives from other departments who are working with standards.

**Hillel Adiri (Israel):** I believe very much in the win-win approach. We are all situated in a dry area. We have a lot of deserts. Every drop of water is important. With common resources we can do a lot, particularly Gaza, the West Bank and Israel, because we are the closest. There are many examples of things that can be done to benefit the farmers. This is the win-win situation.

Let's say I have too much sewage water in Jabalyah, but Raffah is dry. So we can have a joint project in the northern part of the Gaza Strip for recycled water. We use some. You use some. We have a pipe along these desert areas. We can pipe water in to Raffah where you need it. In Israel, water installations are like electricity; we can move it north to south and so on. But we are all still very short of water.

I think that to have the same standards in all four countries may not be the way to go, but we have to start. If we can come out of this seminar with a starting point, it will be a lot.

**Dr. Gershon Baskin (IPCRI):** We can leave this seminar with an inventory of projects that we recommend to our governments to support, or to go to donors for support. We can have a whole list -- water, desertification, whatever we want. Or

the alternative is to use our time to think about a master strategy for regional cooperation in agriculture.

As I said, there are two ways of doing this. There is the bottom-up, which is one project, two projects, ten projects, step by step. Or, at the same time, a parallel track of people thinking from the top at the policy level. And I'm not talking just about standards. Standards are one of the issues.

**Hillel Adiri (Israel):** Perhaps we can agree among ourselves at least to exchange knowledge about diseases, in order to hold the same bank of knowledge. Maybe we would do one category of diseases and Jordan would handle another field, and then we could exchange the information. I say this because having one standard in the Middle East is not the way to go. We do not yet have standards in Israel.

**Dr. Gershon Baskin (IPCRI):** There's a difference between the local standards and the standards we have to meet for the international market.

**Saamer Titi (Palestine):** First of all, we have to identify our priorities and our needs. We can all benefit from each other if we have a network, a website, a database to connect us. We can put up proposals depending on the available facilities. This could be a first step.

**Participant:** First we have to define a program with certain objectives and all sorts of activities. But we cannot forget the major sector, the private sector, the NGOs. They should be included in the workshops because they play a major role.

**Participant:** There are a lot of excellent examples. If we want to work to encourage the peace process, we must work as an integrated team. All our Ministers want cooperation to encourage peace.

**Dr. Gershon Baskin (IPCRI):** Each one of the countries has bi-lateral committees. But there has not yet been a meeting between the four Ministers of Agriculture. A meeting was planned between the Israeli, Palestinian and Jordanian Ministers of Agriculture, but it was cancelled. Maybe this is a challenge to put to the Ministries that all four Ministers need to come together to develop a policy, and map out a detailed working plan.

**Participant:** What would be the agenda? The outcome of this conference must provide an agenda for them. They will not attend unless they feel the outcome will be fruitful. We can provide them an outline they can agree upon. Then each country can be assigned a certain point to monitor.

**Hillel Adiri (Israel):** Dr. Ali mentioned the exporting of grapes, and said they need more experience and knowledge. We can share knowledge with you. Not every country has to do everything. We can exchange knowledge with each other. This means that the Ministers don't have to talk about the same projects. They have to agree upon cooperation, and then there came different projects in the different countries according to various interests.

**Dr. Gershon Baskin (IPCRI):** If the four Ministers came together with the objective of signing a protocol for agricultural cooperation, the text of that protocol then establishes specific goals, not for bi-lateral cooperation, but for cooperation among the four.

Taking grapes as an example, Dr. Ali identified two periods of market potential in Europe -- what he called marketing windows. The challenge is to create a mechanism where the four countries are producing together with a market strategy

that will be ripe for the particular window. It would take a few years to develop.

But the idea behind this, stated in Dr. Gerster's lecture, is for us to approach the European Market as one body. If we want to provide all the thousands of metric tons that Dr. Ali talked about, we cannot do it separately. But if we had a marketing strategy for grapes - that sets out to breed the strains of grapes that will ripen in time to take advantage of the highest prices in Germany or in Northern Europe - then this is something that we could do together. The four countries could produce enough volume to provide for the needs there and to sign the contracts with the central buyers in Europe.

**Hillel Adiri (Israel):** The best example for this is strawberries from Gaza. They start to come into Israel at the end of November and the beginning of December. In Europe at that time it is very cold and there are hardly any strawberries there. They can grow strawberries in greenhouses, but it is very costly in terms of energy.

**Dr. Gershon Baskin (IPCR):** Let's increase the market share of the region by extending the strawberry project to Egypt and Jordan, marketing in Europe under one label, and sharing the profits based on the production quantities.

**Mohid Ali Rahahela (Jordan):** Marketing to Europe as one body, not as competitors; the four countries as one unit.

**Dr. Gershon Baskin (IPCR):** Dr. Gerster said that no one country will be able to market in Europe. We're going to be closed out by the centralization of the European buyers.

**Participant:** One important aspect for marketing to Europe is their standards.

**Hillel Adiri (Israel):** The standard for strawberries in Germany is not the same as that of Marks and Spencer or that of the Swiss. When Dayan became Minister in 1958, we had overproduction in Israel. He told the farmers that the main goal of our agriculture should be to grow what the French like to eat. As a result, we had to change varieties.

in Europe. The Germans are the easiest. They like to pay less and have a lot. The English don't mind paying more, but they want the best. With a joint policy, one class we can send to Marks and Spencer, another class we can send to Germany, responding according to Europe's tastes and needs.

**Dr. Gershon Baskin (IPCR):** What you're saying in terms of policy is that we need to have a cooperative mechanism for identifying the specific windows when the prices are highest on specific crops, and then to determine how our four countries together can move beyond coordination and planning.

The challenge of the European Market is to provide quantity and consistency. You need to provide enough of a market share over a long enough period of time to get the central buyers. As he said, today there are 40 central buyers in Europe. In five or ten years, there will be only 20. And the only way we can succeed is not through coordination -- that is only the beginning -- but through joint marketing under a uniform label. Some label that will become identifiable, like Agrexco is now identifiable all over Europe. Everyone knows the Jaffa orange.

This has to go beyond the thinking of the separate nation-state. Israel is too small to face the challenges of the European Market in the future. Egypt has tremendous land and water resources, and together with the Palestinians and the Jordanians, we have a potential, in the future, of identifying a market share for specific crops.

**Hillel Adiri (Israel):** We all have to market in order to attain this situation of win-win. Our farmers are always jealous of Gaza being able to sell oranges to Saudi Arabia when they cannot. But there could be cooperation on the other side too, with Carmel.

**Dr. Gershon Baskin (IPCR):** Maybe we're not selling oranges to Saudi Arabia, but Israel has the largest export of compost to Saudi Arabia.

**Mohid Ali Rahahela (Jordan):** Jordan needs marketing studies. Regional marketing studies could be very valuable.

**Mohamed Abo Soliman (Egypt)(?):** I suggest a project for capacity building for the next phase we need a database of market information.

**Dr. Gershon Baskin (IPCR):** Dr. Nabil showed us, from one of the new desert projects, that you're setting up farms in the desert that are bigger than cities. And he showed us the satellite imaging of a lake of water in the desert to provide them water. Out of the four countries, Egypt has the most land and the most water.

**Samer Titi (Palestine):** The Palestinians have had technology exchange with Egypt. What happened with Israel and the West Bank and Jordan?

**Dr. Gershon Baskin (IPCR):** We're now sending technology to Thailand.

**Participant:** Nowadays, there is already cooperation with Israel, and the people accept it. But we need training or direction as to how we can use this cooperation. We need to discuss cooperation between the Ministers.

**Hillel Adiri (Israel):** Ministers have to give the green light. They have to deal with the politics.

**Dr. Gershon Baskin (IPCRI):** If we want to be really practical, we should think of suggesting to the Ministers to establish an institution for regional cooperation. Just as the French and Germans created the Coal and Steel Commission that later expanded into the European Union, we should create an institution of Israel, Palestine, Jordan and Egypt for regional agricultural cooperation. The Ministers would then appoint four coordinators. It would have by-laws, working goals, committees. It would create a web site. It would be managed by all four countries. It could include a regional center for market research located in Cairo, a regional center for standards and phytosanitary in Raffah, and a regional center for wastewater re-use in Aqaba. It could have all kinds of different functions.

**Hillel Adiri (Israel):** We have a green light from our Minister.

**Participant:** We must not forget what we have in terms of available facilities and budget.

**Dr. Gershon Baskin (IPCRI):** If the four countries came together after signing a protocol of understanding on agricultural cooperation, and went to the Europeans with a proposal to establish a joint institution, they would fund the whole thing. But we need to be concrete. We need to go to the Ministries with a concrete plan, a strategy of what it is we are proposing, and then suggest to them to do it.

My experience is that if you have a good idea that creates cooperation, there is no shortage of money.

**Participant:** I agree that we have to establish a task force committee to help create the framework. In a project such as this one, it is very important to define the stakeholders, to state from the beginning that the target groups are and so on.

**Hillel Adiri (Israel):** Three of the Ministers have already agreed to meet in two weeks or so.

**Dr. Gershon Baskin (IPCRI):** We can add the other one.

**Participant:** If this will be in the interest of the farmers, the growers, the economy, nothing will stop it.

**Participant:** Benefit to the farmers is the best thing for the peace process.

**Hillel Adiri (Israel):** The market is the name of the game. To be at the top requires quality, and you have to be cheap and strong and efficient.

**Dr. Gershon Baskin (IPCRI):** The best example is Amazon.com on the Internet. They're the largest supplier of books in the world today. It's a company worth more than \$3 billion, and they have no assets. They don't own anything. They have a warehouse. It's actually a catalogue on the computer. They buy and sell books. The profit margin is very small, but the company is worth more than \$3 billion. They don't produce anything, but they market. You order a book on the computer through Amazon and you have it in two weeks, anywhere in the world. This is the way of the future.

I will write up and summarize some of our ideas for tomorrow's meeting. Anybody who is inspired to write down any other concrete ideas is invited to do so.

### Recommendations

**IPCRI (Israel/Palestine Center for Research and Information) Workshop on Harmonization of Agricultural Health, Phytosanitary and Quality Standards for Fresh Fruits and Vegetables between Egypt, Israel, Jordan and Palestine  
Jerusalem, May 15-17, 2000**

Recommendations for a

## Draft Protocol on Agricultural Cooperation between the Ministries of Agriculture of Egypt, Israel, Jordan and Palestine

It is highly recommended that the Ministers of Agriculture of Egypt, Israel, Jordan and Palestine sign a protocol of cooperation between the four countries for the purpose of advancing concrete steps towards the development of possibilities for unified marketing strategies and sale of specific horticulture produce to the large markets of the EU, EFTA, NAFTA, and the Far East.

### Rationale

The large markets (mainly in Europe) are becoming more and more concentrated by a limited number of buyers. The ability to compete and sell to those markets is based on the ability to supply high quality products based on Good Agricultural Practices (GAP) that are in large enough quantities and with promised consistency over time. The ability to profit from the marketing windows that exist in those markets at times when supplies are low, particularly during the winter months, is based on the ability to design the export flow of desired crops to those markets at the right time. There is also a need for designing specific crop specifications and standards for the various sub-sections of the European markets according to the demands of the consumers in those countries.

In order to exploit the export opportunities for the mutual economic benefit of the four countries and in particular for the economic benefit of the farmers, high level and broad based cooperation, coordination, capacity building and joint work is necessary between the four countries. In particular it is worthwhile to mention these specific areas of needed cooperation:

1. Market research and Marketing Information Systems
2. Biological research and design of products according to market demands
3. Data base and registration of pesticides and other agricultural chemicals
4. Development of marketing strategies

5. Adoption of GAP
6. Technology transfer of breeding materials, water, and irrigation technology
7. Forwarding and marketing
8. Transportation of cargo
9. Development of a regional market tag or label
10. Unification of plant protection, quality and quarantine, health, safety and quality standards based on International Plant Protection Convention (IPPC)
11. Advancement of Integrated Crop Management including Integrated Pest Management

A regional commission for agriculture should be established by the decision of the governments of the four. JEPI-RAC should function as the first formal and official regional institution. The main goal of JEPI-RAC is to market fresh horticulture products to the large markets mainly in Europe under one label, through a well defined marketing strategy and based on planning and agricultural research and implementation in the field in order to capitalize on the relative advantages of the agricultural sector of each of the four countries forming JEPI-RAC .

JEPI-RAC will be run by a Board of Commissioners composed of the Four Ministers of Agriculture and two other senior people from each country. The day-to-day running of JEPI-RAC will be by a Board of four directors appointed by the Ministers of Agriculture.

JEPI- Board of Commissioners will be responsible for the appointment of personnel, the approval of strategies and projects and the raising of funds. The four countries will provide agreed upon facilities and in-kind support. Project funds will be sought from the donor nations and international organizations.

JEPI-RAC will have a Constitution of By-Laws that will set it up as a legal regional institution empowered by the Governments of the four. JEPI-RAC will establish four offices, one in each country, each office will head the work of a sub-commission in one of the following four areas:

1. Marketing research and strategies
2. Unification and enforcement of plant protection, health, safety and quality standards
3. Biological and agricultural research
4. Regional agricultural on-line data base

Each sub-commission will have a board of directors composed of at least 2 people from each country that will recommend the specific activities of the sub-commission to JEPI-RAC Board of Commissioners for approval.

JEPI-RAC will seek membership as a regional working group in international organizations such as IPPC , the Bio-diversity Conference, the Climate Change Convention and other related institutions.

### **Recommendations for a Draft Protocol on Marketing, Forwarding, Packaging and Quality Standard Cooperation between the Ministry of Egypt, Israel, Jordan and Palestine.**

Recommendations of this workshop are as follows:

1. There is importance in collecting information from the markets in this region as well as other regions (e.g. Western Europe, Far East, etc.) and to influence the relevant decision makers to invest in this issue.
2. There is a need in regional standards for fresh products and all kinds of propagation material in order to protect this region from penetration of low quality products. Another aspect of this issue is to help the trade of these four countries and in the future more countries from this region.
3. There is a need for cooperation in order to learn the marketing methods of the destination countries, to create a regional marketing

strategy. In addition to this, to develop strategy in transportation (by sea, air, etc.) and in sales promotion of products typical to this region.

4. There is a need to increase the growers and marketers awareness to make production cheaper, higher quality and more efficient in order to compete in the markets when the purpose is to aim for high quality and price in the market.

5. It is important to produce high value products in the region (seeds, etc.). Research has to be involved in this issue.

6. cooperation between the 4 countries. Each country will contribute according to their ability, in order to complete the other countries (courses, study groups, etc.)

7. The numbers of this workshop will be published in an article of the professional newsletters of each respective country.

This article will expand on the issues discussed at the workshop.

## Recommendations of the phytosanitary working group at the IPCRI Agricultural Conference

1. It is proposed to exchange information about new pests. Samples or specimens are to be sent for identification in laboratories with expertise. Knowledge about identification and detection should be made available to Jordan, Egypt, Palestine and Israel (JEPI).
2. Databases on pests present in each country will be made available JEPI. The database will include the name of the pest, the strain or biotype the date, the host plant, the climate, the location in which it was found and the methods of control. These databases will serve to refer to citations and information available on each pest.
3. It is proposed to exchange among the countries involved the existing phytosanitary regulations and criteria. There should be meetings of technical professionals from JEPI in order to address harmonized standards, based on the principles of each of the countries and the internationally agreed rules. It is advised that the harmonized regulations (based on laws) to enforce quarantine at borders.
4. It is advised that the methods for testing and verification of pest presence will be agreed by the technical personnel. A standing committee of technical professionals will negotiate changes in agreed regulations or in the verification protocols should be made in agreement of JEPI.
5. Information dissemination will be made by extension officers, media, and workshops to inform farmers and end users of presence of new pests and diseases. Forecast and expert system should be made available to respective organization in JEPI.
6. We recommend a proper utilization of media and training methods to inform the implementation of IPM and good management practices.

7. A phytosanitary standing committee will negotiate quarantine restrictions on import and export of agricultural produce among the parties involved. It is proposed to produce an agreed phytosanitary certificate. The standing committee will convene upon the request of one of the parties.
8. Create a website on phytosanitary news available to all parties involved but limited to users that have authorization.
9. Databases on the list of pesticides used in each country will be made available to all the parties involved. The database will include the common and generic name of the pesticide, the pest to be controlled by it, the recommended mode of application, the safety period and the threshold allowed on a list of crop at harvest time.
10. It is proposed to exchange among the countries involved the existing regulations and criteria about the allowed residues of pesticides in imported produce. There should be meetings of technical professionals from all four parties in order to address harmonized standards, based on the principles of each of the countries and the internationally agreed rules. It is advised that the harmonized regulations (will be based on laws) to enforce quarantine at borders.
11. It is advised that the methods for testing and verification of pesticides presence will be agreed by the technical personnel. A standing committee of technical professionals will negotiate changes in agreed regulations or in the verification protocols should be made in agreement of all four countries.
12. Genetically modified crops and organisms should be made known on agreed labels and certificates. The procedures and methods to detect GMO should be made available by the national GMO committee to the GMO committees of the four parties. Test and field experiments with GMO that are likely to affect neighboring parties should be made known by the national GMO committee to the respective committee in the neighboring country.

13. Representatives from the GMO committees of the four parties should meet to harmonize the standards and regulations in producing and importing GM crops. Personnel from all four parties involved should be trained in order to be able to cope with the novel techniques needed to detect GMOs.

