



**PAL-YAL**

Engineering & International Projects Ltd.

# INTERNATIONAL AND ISRAELI ECONOMIC CO-OPERATION IN INTENSIVE AGRICULTURE

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## **A. GENERAL SUMMARY.**

One of the main needs of Israel today is to increase exports in all areas of the economy.

The Israeli economy is not as buoyant as in previous years and government involvement in the economic process is very strong.

The unemployment curve is increasing daily and job vacancies are very difficult to come by.

The balance between imports and exports is not stable. Most of the factories manufacturing agricultural equipment and appliances are experiencing a drastic reduction in order intakes and are losing money.

Most of these factories are owned by Kibbutz communities which traditionally employ very intelligent and dedicated staff. However, the kibbutz communities rotate in their employs and therefore lack expertise, especially in the areas of management, marketing, and international marketing.

The ability to deal with systems and not individual products is very short and the competition on international markets is very intense.

At the same time, many local manufacturers in target countries began production of similar products, especially simplified versions or copies of Israeli products.

During the last few years, Israel has become a large laboratory for agriculture especially for intensive agricultural methods.

In irrigation, for example, it was expected from Israeli experts to supply complete irrigation systems, in which we are still the leaders. However, today's expectations are to supply complete agricultural projects and not only irrigation projects.

## **B. MARKETING OF INTENSIVE AGRICULTURAL SYSTEMS.**

In intensive agricultural systems, the know – how component is extremely important, therefore the agricultural process of crop – growing, seeds, planting, peaking, marketing and processing, should be carefully considered.

The system is a combination of main agricultural components and secondary agricultural components. Some of these agricultural components have already been manufactured in target countries and there is a strong economic interest for local manufacturers to become involved in these making these components in the short term and to develop more products in the long – term.

Substantial parts of the system are not practical to import from Israel, therefore local manufacturing procedures must be developed.

Initially, the imported component of the system is substantial, around 20 – 30% of the cost. However, with the development of local manufacturing plants, these imported components are drastically reduced and remain only a matter of sharing know – how.

Combining international Israeli research into new agricultural areas could be developed. To ensure success, Israeli specialists must study the local environments so that the technology can be adapted to local conditions.

The basic environment factors that must be studied are:

- a) Economics and marketing.
- b) Agricultural conditions.
- c) Climatic conditions.
- d) Human resources.
- e) Marketing possibilities for agricultural products.
- f) Local know – how.
- g) Optimization of production efficiency (price, timing, position, promotion, etc.)

Projects in intensive agriculture that have been developed as joint efforts between industrial and agricultural interests are called "Industrial – Agricultural" projects, or "Agro – Industry" projects.

For example:

Industrial agriculture	}	----->	Milk powder production.
		----->	Dry concentrated.
		----->	Vegetables.
		----->	Egg powder.
		----->	Packaging of agricultural.
		----->	Products.
		----->	Etc.

Agro - Industry	}	----->	Growing vegetables.
		----->	Controlled greenhouses.
		----->	Poultry production.
		----->	Duck liver production.
		----->	Fish production.
		----->	Etc.

As we have not yet developed the transportation of fresh fruit and vegetables by rockets jets, we, as Israelis, are not able to supply fresh products to the Far East and Pacific – Asian & far countries. At the same time, those countries are not competing with traditional Israeli fresh produce markets.

At the moment Israel supplies flowers and vegetables to Japan, the u.s.a. & other overseas markets. These could become a spring board to many countries in the Far East and Pacific – Asian region, which are very difficult to penetrate from Israel.

In the international market, there is a shortage of expertise and especially, of companies dealing with complete agricultural projects. The reason for this is that those projects are of a very high complexity compared to the supply of individual products.

Examples for intensive agricultural system:  
Growing vegetables in greenhouses in soilless, controlled conditions.

<b>INPUT</b>		<b>OUTPUT</b>
Construction ---	<b>S</b>	----->
Irrig. System ---	<b>Y</b>	----->
Heating -----	<b>S</b>	----->
Fertilizer -----	<b>T</b>	----->
Plants -----	<b>E</b>	----->
Etc. etc. -----	<b>M</b>	----->
		-- Yield

**EXPENSES:** Growers and agronomist.  
Water and fertilizer.  
Herbicides and pesticides.  
Supervision and support.  
Others: petrol, admin, interest, etc.

According to the preliminary design and the analysis of the local market, we are able to calculate the Break Even Point (B.E.P) for each specific project, and to show to the potential investor profitability on the investment.

The income should cover all general expenses and capital investment according to the lifetime of each of the investment components.

For example: Structural construction for 10 years.  
Irrigation system for 5 years.  
Plants for 1 year.  
Etc.

The target function should be determined as a part of the technology and of local environmental conditions, subject to extreme conditions. It is extremely important to learn the cultural environment and it is recommended to share know – how with local professionals dealing with

the subject of industrial / agricultural projects. This ensures that the process is understood and developed properly.

The imported component from Israel could be 20 – 50% of the total project cost and the shared know how can increase the profitability of the investors, farmers, marketing people, government and all those dealing with this subject.

### **C. TARGET AND GOALS.**

- 1) To interest investors.
- 2) Product evaluation.
- 3) Profitability research.
- 4) Project viability evaluation (fish, eggs, flowers).
- 5) Pilot projects.
- 6) Achievement of economic profitability in the short term.

### **D. EXPLORING POSSIBILITIES FOR JOINT ECONOMIC CO-OPERATION SYSTEMS.**

- a) International Israeli joint ventures for managing agricultural projects with possibilities of importing components from Israel and therefore enhancing both countries export capabilities.
- b) Selling the know – how and the ability to build projects end to produce the products.

I trust my short introduction to this comprehensive subject will be of interest to you. Please do not hesitate to contact me if I can be of any assistance and if you have any other suggestions that could advance the above.

Yours faithfully,

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