

Carnation Growing in Israel

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Despite newspaper headlines all over the world concentrating on the Middle East tension, the Israeli carnation growers were peacefully planning their increased production for the coming season during my visit to Israel in May 1970. The first carnation cut flowers were grown for commercial purposes in Israel 35 years ago. This country with its Mediterranean climate and practically year round sunshine is quite ideal for carnation growing. In the beginning, outdoor planting was practiced, but about 10-15 years ago growers gradually switched to using plastic covering, which proved very successful in eliminating rainstorm damage. The plastic houses in Israel are similar to those used in Southern California.

In spite of what has been said about the ideal Israeli climate for carnation growing, the whole of the country is not suited for this industry. Most of the carnation planting is concentrated in the coastal strip around Tel Aviv, but this area does not necessarily give the best results because of higher humidity. Better results are obtained in the other two regions where carnations are grown commercially—in the northern Carmel Mountain region, and in the vicinity of Ashkelon in the South (on the outskirts of the Negev desert). Here, a rapid development of carnation growing can be observed, thanks to plentiful sunshine and lower humidity than prevails in the central Tel Aviv area.

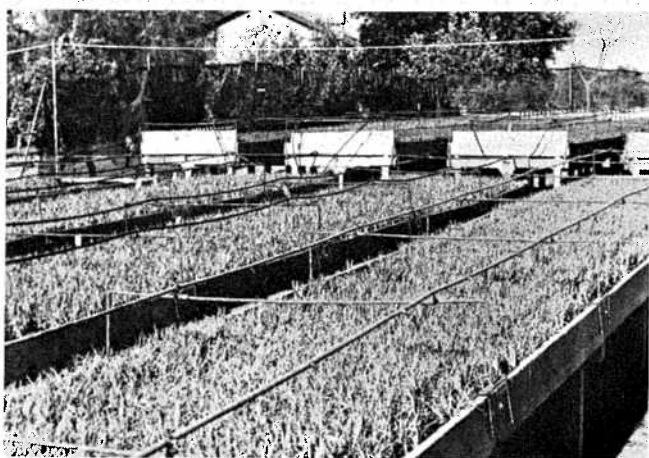


Fig. 1: Outdoor mist propagation at Shemi Emek Shorek, Israel.

The cut-flower industry is mainly in private hands, comprising a large number of small family enterprises, varying in size from 1000-2000 sq. m. each. It should also be noted that apart from the cut-flower industry there exist propagators who successfully grow millions of carnation cuttings under open air conditions, both for export and for the local market (see Figs. 1 and 2).

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Fig. 2: Arab girls harvesting cuttings from miniature stock plants.

In most of the carnation growing areas the generally sandy character of the soil permits easy sterilization in sufficient depth by chemical treatment. Growers in the heavy soil areas are changing locations for every new planting, since heavy soils cannot be treated chemically.

According to Mr. Zeev H. Gollop, Senior Agronomist at the Dead Sea Works, carnation growers obtain excellent results by introducing pre-heated methylbromide under plastic coverings followed by heavy leaching. As this chemical is produced in Israel in large quantities, it is the generally accepted treatment. A recent visit by Professor Joe Hanan of Colorado State University stimulated interest in inert media growing experiments. Such trials are already under way at the Hebrew University of Jerusalem and at the Volcani Institute, Bet-Dagan, with domestic volcanic scoria from the Golan Heights (locally called "Tuff"). Should the experiments prove successful, there will only remain the problem of transporting this inert media, since the cost of the material itself is negligible. Experiments made with pure peat have proved somewhat less successful. However, peat is often added in order to improve the water and nutrient holding capacity of the sandy soil, as water in Israel is generally scarce.

In the South, watering is mostly done by small overhead sprinklers, even at the flowering stage. Some growers use a modified gates system, with the feeding line along the middle of the bench, and sometimes an Israel-made Trickle Irrigation System is used. Liquid feeding is generally practiced.

As the standard carnation trade on the European market has become very competitive—especially with other Mediterranean countries—Israeli growers are concentrating on miniatures with increasing success (Fig. 3). Miniatures sold under the trade name "CARMEL" are finding an ever expanding market and enjoy an excellent reputation, especially in the Scandinavian countries. The main varieties are (approx): 40% Cerise Royalette, 15% Royalette, 15% White Royalette, 10% Starfire, 10% Peachy, 5% Goldilocks. The remaining 5% are divided between Lisa, Miniqueen and Sam's Pride.



Fig. 3: Mr. Alexander of Ramat Hadar, leading miniature grower.

The general trend in miniatures shows a decreasing interest for Starfire—because of poor spray formation; and for Goldilocks—because of brittleness and weak stems. Trials with Tony, a new yellow miniature, have proved quite satisfactory and it will probably replace Goldilocks. Among the Reds, no satisfactory substitute for Starfire has been found.

Planting time is normally from the middle of May until the beginning of June. Royalette varieties are often given two complete pinches and start flowering about mid-October, just in time for the export season. Production is planned by the Ministry of Agriculture in co-operation with the Flower Marketing Board and AGREXCO, an export company owned by the Government in partnership with the Farmers Association. Growers are given every assistance by the Extension Service throughout the country, such as latest information in growing techniques.

A step by step description is herewith given of the export marketing procedure, as normally carried out. This will illustrate how efficiently these matters are handled in Israel:

1. Flowers are cut in the early morning and brought to cold storage immediately.
2. They are graded and bunched by the growers, and
3. Taken in water-filled buckets to the central packing station. One of the five packing stations in the country is located at Lod Airport.
4. They are placed in cold storage at the packing stations.
5. After passing a quality and health check, the flowers are accepted or discarded. They are regraded, if necessary. Inferior quality is returned to the grower and sold locally.
6. Bunches passed for export are packed in export boxes and labelled with variety and grower's number.
7. They then go back into cold storage until shipment. In general, flowers are dispatched the night following their harvesting.

In order to provide an even better service, AGREXCO plans to add for the next season at least two additional charter flights a day for flower transportation to Europe.



Fig. 4: Settler from South America with good miniature stem produced at Kohaw Village.

The total value of flowers shipped during the 1969/70 season amounts to approx. US\$5 million, of which approx. US\$400,000 was carnation miniature export. The total number of stems shipped was approx. 8 million, with last season's average export price per stem at approx. 7 US cents.

A new AGREXCO office was opened in Frankfurt in November 1969, in addition to the one already in Zurich. These offices act as order and sales centers for Europe. Also, AGREXCO's huge cold storage space at Frankfurt Airport is used effectively whenever flower shipments have to be rerouted because of weather conditions. These combined facilities assure the overseas client excellent service at all times.

For the new season, plans are under way to increase the number of miniatures planted from 8 to 13 acres. In addition, some growers are planning to pinch the old plants to a height of about 6-8 inches and to grow them for another season. There is also an interest in heating the plastic houses and thereby speeding up the mid-winter production; this is to eliminate the *Alternaria* problem during humid weather.

According to Hanna Klausner of the Israel Extension Service, there is a great potential for Israel-grown carnation miniatures, provided growing and handling are done right. She has started to teach her countrymen these techniques and the progress has been fantastic. No doubt that as soon as new and better varieties are introduced, an ever increasing interest will be shown all over Europe for these graceful and long lasting flowers from Israel.