

# Carnations in Italy

by

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The Italian flower industry is centered around three locations: Naples, around Milan in Northern Italy, and along the Italian Riviera from the French border to Genoa. Flower seed production is also an important industry, especially in some of the drier sections.

Much of the carnation production is in open ground, although some growers cover their plants with sash in winter to protect from rains and dews. Carnation plantings are made near the tops, or on terraces



along the sides of the coastal hills. These locations are cooler in summer, and often drier in winter than the land near the level of the sea. The soil which I saw along the Riviera was heavy clay, often white or yellowish in color. The pH is so high in some of the soils that yellow and orange varieties are extremely chlorotic.

Sim varieties are grown with winter cover. Varieties bred locally or in Southern France make up most of the plantings in the open, although Sim is being used as a parent in present breeding programs.

Eight thousand families are employed in the carnation industry in the province around Ventimiglia and Sanremo. The flower industry in this Riviera section covers around 7000 acres of open ground and 350 acres of glass. Down the coast in the mountainous section around Viareggio some 300 acres, mostly of carnations, are grown for summer flowering, with markets in Italy and Switzerland.

Sr. Molo runs what is probably the largest carnation breeding operation in the world at Sanremo, growing some 500 thousand 1 and 2-year seedlings each year. He has developed many outstanding varieties adapted to the Riviera section. Califo and Emile are two good red varieties that he has bred. His seedlings are all grown in open ground with overhead skinner irrigation. Sr. Molo and his wife make around 1500 crosses a year and are happy to get one good variety from this. He is able to make carnation breeding pay by using a rental arrangement. Growers who want his varieties sign an agreement and pay a small royalty (1 to 1½ cents) per plant each year for the right to grow them. The arrangement lasts as long as the variety is grown. Sr. Molo has obtained patents in Italy, France, and Spain. Because the breeding operation is a paying business, commercial growers are assured of a continuing succession of improved varieties.

Sr. Aristide Blancardi is one of the most progressive growers of Sim varieties. His new grading room is a palace with floors of tile and marble. I was assured these materials are among the cheapest available. The arrangement with his employees is probably somewhat unique, but it is similar to owner-employee arrange-

ments throughout Southern Europe. Sr. Blancardi's employees work better and live better than employees of most other growers in this section, however.

On this farm the employees share 50% of the profits and all costs are shared 50-50. The owner is a sort of father to all his employee families--altogether 40 workers. There is an accounting of what is cut and what is sold every week. If a worker fails to carry his share of the work, the owner mentions this fact to his foreman. The foreman or the head of his family then sends him away if his work is not satisfactory. The number of workers is controlled entirely by the three family fathers. Working hours during the summer were 7 to 11 am and 3 to 7 pm. Housing and land for a garden are also supplied by the owner.

Summer day temperatures along this section are around 62 to 75°F. Olives, lemons, bougainvillia, and many other sub-tropical plants make it a veritable paradise. In sight of the area are mountains which carry snow much of the year.

Sr. Blancardi exports around 70% of his best carnations to Germany and sells the remaining 30% of inferior blooms locally at around one cent each. His export returns for Sim varieties during 1958-59 by month were as follows:

October	1.6 to 1.9 cents each
November	2.4 to 2.9
December	3.5 to 3.8
January to	
April	3.8 to 4.8
May	2.4 to 2.9

The Blancardi firm averaged 4.5 cents per bloom for best quality in 1958-59. For 1959-60 their average slipped to 3.6 cents.

This farm had planted 1 million square feet or about 25 acres of carnations in 1960. Cost of covering with sash is now about 70 cents per square foot and the unbelievable part about this is that pitch pine 1 by 4's from America supply the cheapest lumber for framework.

The firm of Wilna Benso in Ventimiglia produces cuttings of the Sim varieties by the mother block method. This firm has modern greenhouse construction and probably the first fan and pad evaporative cooling in southern Europe. Their greenhouse con-

struction costs have been around \$1.15 per square foot of ground area covered.

One of the best quotes I have ever heard on carnations is from Senora Molo. "The carnation likes the water, but likes the water that goes away."

#### A few words of explanation on Tensiometers

Tensiometers are sold under several trade names. The vacuum gage is either calibrated in 100 units or in 30. If the full gage reading is 100, this represents one atmosphere of vacuum, which is roughly the suction required to lift water in a glass tube 1000 centimeters. Soil tension is often expressed in terms of hundreds of centimeters of water. The complete gage reading of 100 is one atmosphere or one bar. A reading of 30 would be 0.3 bars, 300 cm. of water, or 300 millibars.

When the vacuum gage has 30 units, the reading is in inches of mercury. A reading of 30 means a vacuum or suction equivalent to that required to lift a column of mercury 30 inches and is one atmosphere, or one bar. Readings of 10

on this gage would be 330 millibars, and 15 would be 500 millibars.

Atmospheric pressure is reduced as the altitude increases. At 5000 feet altitude, one atmosphere is near 26 inches of mercury instead of 30. This difference is probably of little importance in measuring soil moisture tensions, however a tension of 500 millibars measured in Colorado would average 13% less actual tension than the same measurement at sea level.

1 Atmosphere at  
sea level = 30" mercury  
= 1 bar  
= 1000 millibars  
= 1030 cm of water

1 millibar is roughly equal to 1 cm of water. Multiply Lark or Irrometer readings by 10 to get millibars or cm of water.

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