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Floriculture in Spain

by

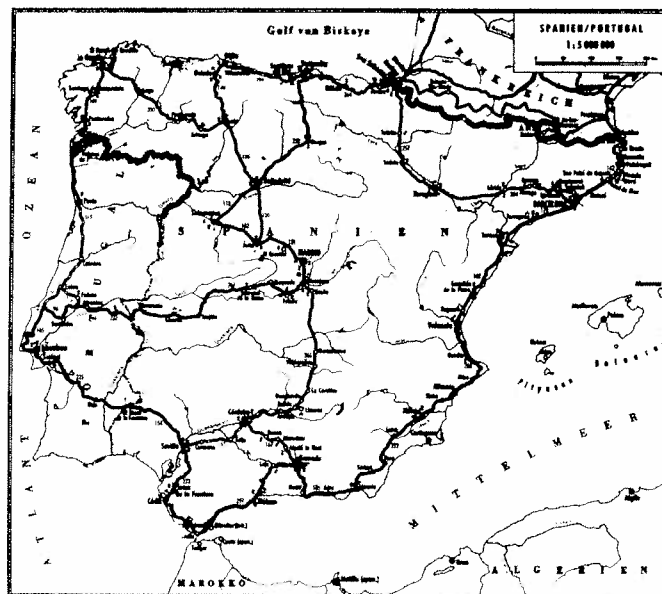
W.D. Holley

The principal area for flower growing is the 15 miles of costal area between Barcelona and the village of Caldetas. This area lies between two rivers, Rio Besos and Rio Tordera, and is called a maresma, meaning an area that is somewhat swampy but containing good soil. This land lies between the hills and the sea and is seldom more than 5 or 6 miles wide. Numerous dry washes called rieras or torentes, come down out of the hills and carry the flood water from occasional flash rains.

The climate is subtropical with much influence from the Mediterranean Sea. The temperature in summer is seldom over 85°F. On exceptional years the winter temperature may drop below freezing for a few hours on the coldest night. Dews from the sea are a problem in winter. The latitude is over 41°N -- about the same as that of Cheyenne, Wyoming.

The principal flower crops are carnation, rose, lilac, gladiolus, calendula and streptolizia. Asparagus plumosus and other greens are grown under lath houses for local use.

The use of flowers has not developed greatly in Spain, hence most of the flowers are grown for export. There are only a few



retail florists who supply services. Many of the flowers are sold in the streets or in open air markets. The Spanish people do not make presents of flowers nor do flowers seem especially important in wedding and other occasions where flowers are used most in other countries.

A very old system in Spain is the relation between owner of a farm and his employees. Many slight modifications exist in their agriculture today, but basically the system is this. The owner supplies the land, planting stock and machinery. The workers, usually one to several families,

supply the labor. Profits are split 50-50 with the workers drawing on their share each week. At the end of the season they have a final accounting. When calculating the profit to be split, no deduction is made for planting stock (if purchased), taxes, machinery. In addition the workers may get housing on the farm and some foods which are produced on the farm. This does not differ greatly from the cost of operating a greenhouse flower growing business in America as 50 to 60 per cent of the cost of production is labor.

Ordinary labor is hired at around 15 cents per hour in this region. Wages are about double that of 2 years ago and are influenced upward because Barcelona and vicinity is the principal manufacturing area of Spain. Workers now have social security and insurance paid by the employer. All the family must work to have a living but the workers seem happy.

Actually, the workers have very little but they require very little. They eat a lot of bread, which is far better than American bread. Bread prices are low and controlled by the government, about the only control they have that seems to be followed.

Carnations in Spain

Although carnations were grown in Spain around 1200 AD, the present system of commercial culture started about 1926. Most of the carnations are grown in open fields with very little cover used so far. The Nice varieties from France and Italy make up almost the entire planting. Last year the first plantings to any extent were made of the Sim varieties.

The Nice varieties are planted about April 15, and kept pinched until a reasonably large plant is developed. They usually pinch the cuttings at planting time, a very old practice. Three rows of plants are set in a flat bed approximately 2 feet wide. Ridges between the beds serve to control flood irrigation and as walks. The plants are supported in the same manner as in southern France by means of stakes and a network of string.

One very observing grower, Lorenzo Vila, has recently started planting his carnations on the ridges and using the low areas for walks, which he cultivates

by machinery. His plantings made in this manner were almost 100 per cent better than those planted in the usual way in the same soil. His plants on ridges were less diseased and much more vigorous. This grower got the idea from an American film on irrigation.

The soils used for carnations have grown crops for hundreds of years and have all kinds of nematodes, disease organisms and soil insects. Most soils are very sandy and low in fertility. The carnation growers usually grow tomatoes, peppers, beans, and a few other vegetable crops. They practice a 3 to 4 year rotation with their carnations, which is about all the control practice they have had heretofore for soil borne diseases. A few growers are starting to use Shell DD for thinning out the nematodes. Others flood the land for a period and believe they get considerable control of nematodes in this manner.

Deep plowing (1 meter) is sometimes practiced to bring up subsoil and break hardpans. The land is arranged in benches or steps up gentle slopes and the irrigation systems of concrete boxes and tile or concrete pipe save a lot of irrigation water, which seems adequate in this section.

In preparing soil for planting 1000 m² of Sim this year, one of the most progressive companies added large amounts of straw horse manure, as well as superphosphate, potassium sulfate, calcium sulfate, and some ammonium sulfate. This was the first time to their knowledge that soil had been prepared according to soil test. One could take sand, which is about what they have, and make it productive with this treatment. They also treated this soil with Shell DD for nematodes.

Carnation cuttings from a northern European source planted June 18, were ready to disbud on August 6. The health and vigor of the plants was outstanding. Cuttings planted June 29, were well branched and just beginning to elongate flower stems. These plants were in the open but posts had been set for supports to hold sash covering later in the season.

Insects are a big problem in Spain with about all species normally attacking carnations and a few new ones (to me).

They use heptachlor, which is very cheap, against thrips and aphids. They have the usual trouble from 2-spotted mites. A species of tortrix which acts as a bud worm, eating the petals out of developing flower buds, influences their disbudding practices. They are hesitant to disbud to a single flower, because the bud worm

may take it. If they leave all buds, perhaps the worms won't find all of them. Another insect which seems unusual to this area is believed by some growers to be the larva of the Mediterranean fruit fly, or a similar species. It is the same fly that lays eggs in the young olives. The eggs hatch into tiny yellow worms which ruin the young olives, or in the case of carnations, act as leaf miners. DDT has been used against the fruit fly and Diazinon has been used against both the tortrix and the fly.

Diseases are also a great problem. There is no source for disease free stock of the Nice varieties. Over the years the most disease resistant varieties have been naturally selected. The Sim varieties, which are just getting started, may be more

susceptible to some of their diseases, but there will be cleaner planting stock available to them. The Vilagel firm at Vilasar de Mar is buying in clean stock each year and propagating from it for sale to other growers.

Because of nightly dews in winter there is considerable trouble from mold organisms on the flowers, and other surface diseases on the plants. Some growers are spraying with Dithane Z78 to combat this. A few are starting to cover with sash in winter. There are few greenhouses, called *invernaderos*, as yet and most of these are home made structures with concrete bars. There will be more structures as the industry progresses.

One bunch of 50 carnations (Nice varieties) averaged around 25 pesetas or about 42 cents last year. One of the biggest problems with the flowers from this area is that due to carelessness or lack of information, about one bunch out of three is worthless for export. They have a long way to go in carnation culture, but I found them eager for information, and so grateful when it was offered.