advisors. The first one, Seward Besemer, has been at work in San Diego County since 1957. His specialty in this county is cut flowers. Seward Besemer:

FLORAL INDUSTRY OF SAN DIEGO COUNTY, CALIFORNIA

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Prior to 1950 most of the county's flower production consisted of field-grown items such as gladiolus, Column stock and bird-of-paradise. These products were marketed locally in Los Angeles or San Diego.

Greenhouse production of cut flowers and pot plants began after 1950. At this time air transportation capability made it possible to grow flowers in "natural" climates and transport to markets throughout the U.S. Also, the advent of extruded plastic films enabled mild climate producers to construct economical structures to protect flower crops from winter rains.

The San Diego coastal climate is characterized by mild winders and cool summers. The average annual sunshine is over 80 percent with excellent light energy during the winter and spring months. The prevailing onshore wind from the Pacific ocean helps to ventilate the flower crops.

In 1974 the estimated greenhouse area in San Diego County is 400 acres. There are also 2500 acres of field flowers and foliage. At least 250 acres of greenhouses are devoted to the major crops of carnations and chrysanthemums. There are also about 25 acres of greenhouse roses, 20 acres of orchids, 20 acres of poinsettias for propagation, 20 acres of pot chrysanthemums and about 50 acres of pot foliage plant.

The major field flowers are gladiolus, marguerite daisies, bird-of-paradise, statice, and gyposphila. All together, San Diego County produced over 100 different floral products. Some more unusual items are Geraldton waxflower and Leptospermum, natives of Australia. Numerous exotic species of proteas are now being introduced to commercial trade. These are native to South Africa, New Zealand, and Australia.

The San Diego County floral industry is well diversified in crops produced. Most flower growers are in the small to medium-size category. Presently there is much shifting of crops. Some carnation and chrysanthemum growers are shifting partially to pot

plants. Larger firms are diversifying their production to include several major crops and integrating production with marketing.

Foliage plant growers are looking at the possibility of buying rooted plants from certified nurseries in Hawaii and finishing the plants for sale on the mainland. More propagation will likely be done by specialists.

Problems of the floral industry are inflation, foreign import competition, high land costs, taxes, zoning, transportation costs and availability, and increasing restrictions on use of pesticides.

The small one-crop producer who is dependent on a commission wholesaler to sell his product, is slowly running out of capital. The small producer finds it more difficult to obtain supplies, pay labor and reduce costs to compete with larger firms and foreign producers.

The trend is toward larger and larger enterprises with a diversified product-mix and doing their own marketing. Still dependent on "traditional" florist sales, the larger firms are developing more "mass-market" sales. Management must be top-notch. The larger firms are looking for more ways of maximizing production per unit, utilizing mechanization, and building even less expensive greenhouses. Larger firms are often in a better position to obtain necessary capital and supplies in today's supply-scarce situation. The progressive firms are doing more long-range planning, setting goals, studying markets, looking for new crops, looking for new product forms, packaging, and better methods of post-harvest handling. As air transportation becomes more costly and service declines, there may be greater movement of floral products by refrigerated truck. This will require more consolidation of shipments and change in market patterns.

In 1974, San Diego County floral products were valued at over \$22 million (wholesale). Since most of the sales are outside of the county, the dollars returned are "new money." Flower growing has a high labor requirement and it is estimated that 2000 persons depend on the flower industry for a livelihood.

ROBERT WEIDNER: The second half of our team on the subject of horticulture in San Diego is Jim Breece. Jim has worked for the State of California on virus diseases of stone fruit for quite a while, then he went into nematology work and then into plant pathology. Since 1964 he has been our farm advisor in San Diego County for nursery stock. I present to you Jim Breece: