

# Some Developments in Dutch Glasshouse Horticulture. The Director's Report<sup>1</sup>

Although heating costs increased by about 25% in 1979, there was no further decline in greenhouse profitability in Holland compared with the previous year. For vegetable, cut flower and pot plant greenhouses, costs amounted to \$0.49, \$0.65 and \$1.02 per sq. ft. greenhouse area respectively.<sup>2</sup> Labor costs in these sections of the industry account for more than 30% of the total production costs per sq. meter, but the proportion of total costs has not increased. There was again a great deal of interest in switching from glasshouse vegetables to cut flowers. There is also a fairly substantial change taking place from cut flowers to pot plant crops.

In the vegetable industry, the largest increase took place in the acreage of radish, while the acreage of fleshy tomatoes also had a substantial increase. Acreage of new crops such as kohlrabi, spanish radish and chinese cabbage also increased again.

The switch to almost fully automated pot plant production continued unabated. There was also a substantial increase in acreage of spray carnations, gerberas and roses. Growers also became interested in the so-called summer flowers.

Investments in greenhouse and heating systems to save energy were substantial. There was a sharp increase in the

<sup>1</sup>1979 Annual Report. Glasshouse Crops Research and Experiment Station. Naaldwijk, The Netherlands  
<sup>2</sup>Rate of exchange: One Dutch guilder = \$0.442 U.S.

number of combustion gas condensers installed, and it was estimated that more than 1000 condensers were in use by the end of the year. Many double-clad gables were installed. On a limited scale, greenhouses were also covered with alternative materials such as double-glazed panes, hortiplus glass and similar materials. Thermal screens were installed to a limited extent.

It is expected that energy costs will continue to rise, as well as labor, and the Dutch industry is faced with a labor shortage.

It is worth mentioning that a greenhouse with 43,200 sq. ft. was adapted for research purposes. This has increased the facilities for cultivar trials in particular. An important improvement was made to facilities for routine soil analyses. The determination of trace elements in nutrient solutions was automated. Computer facilities were expanded.

The problems connected with crop production in rockwool and nutrient film were given a great deal of attention. An investigation was carried out to establish descriptions of the physical qualities of potting composts. Work on water loss was continued, with investigation into effects of saline irrigation water on crop quality and yield. Attempts were made to improve efficiency of energy usage by improving greenhouse climate controls. The effects of thermal screens were studied, showing several advantages and disadvantages.

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