

RESEARCH STATION IN BOSKOOP
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Research Station for Arboriculture
Boskoop
The Netherlands

Boskoop is the most important nursery-centre of The Netherlands, ca. 1000 nurseries with a total area of 900 ha, concentrated in Boskoop and the surrounding villages.

The topsoil is composed of about equal parts of humus, sand and clay. The pH varies between 4.5 and 5.5. The watertable is about 60 cm below the surface. This peaty, moist and acid topsoil has the advantage of quickening re-establishment of the young plants, is very well suited to the growing of ericaceous plants and further the forming of good root-balls. A drawback is the permanent shrinking of the topsoil, so that new soil (peat soil or mud from the canals) has to be brought up regularly. The subsoil consists of 3-4 m peat overlying 9-10 m of peaty clay. This softness of the subsoil causes the construction of roads and buildings to be extremely expensive (piles of 13-16 m).

The production of Boskoop is composed of ornamental plants only, the main products being a) ericaceous plants, b) ornamental conifers, c) ornamental shrubs, d) roses (esp. miniature), e) perennials. Within these groups an enormous variety of plants is grown.

The total Boskoop production in 1976 is estimated at Dfl. 100,000,000.-

The nurseries have all the same typical shape: narrow strips of land (approximately 30 m wide) surrounded by canals. The average area is only 0.8 ha, the larger nurseries being approximately 6-8 ha. The culture on these smallholdings is very intensive, it needs mostly 2-3 persons per ha. Some nurseries are more or less specialized but usually a very large amount of species and varieties is grown. A typical aspect of the Boskoop nurseries is the very intensive propagation (especially by cutting

and grafting) in greenhouse and frames. Other means of propagation are budding, layering and dividing. Nearly all nursery-activities are done by manual labour.

The soil-properties, the growth of so many different varieties and the intensive utilization of every square inch prevent any considerable mechanization. We can divide the Boskoop nurseries into 2 categories, those with and those without trade.

The export-trade is the source of life of the Boskoop nursery-centre, as 90% of its products are exported all over the world, especially to Great Britain, West Germany, Sweden, France, Italy, Belgium, Switzerland and Canada. A large share of the production in other districts of The Netherlands is also exported via Boskoop. The entire Dutch export of nursery products in 1967/1977 was ca. Dfl. 172,000,000.-.

Every year the exporters go abroad to visit their clients. The plants, which the exporters themselves do not grow, are bought from the other nurserymen. During the export season these plants are delivered at the packing sheds, which is mostly done by barge but in future, if possible, plants more and more will be transported by car too. After the inspection by the Plant protection service they are burlapped and packed in cases or baskets to be forwarded by ship, truck or train.

The research station is an association, founded by the nurserymen and governed by a board, which includes representatives of all Dutch nurseryman-organizations. Close cooperation with the extension service and research is ensured by the fact that the horticultural advisor is director of the Research Station at the same time. Both the assistants of the extension service and the research workers of the research station are cooperating in the research work. The research station is financed by the subscriptions of its members and by grants of the national organization of nurserymen, the government, the country and the municipalities. The staff is formed by 4 scientific workers, 2 assistants and 10 labourers.

The experiments are mostly focused on: propagation (cutting, grafting, rootstocks, etc.); soil- and manuring problems (drainage, pH, etc.); control of pests and diseases; chemical weed control; breeding evaluation and distribution of selected plant material; economics; work-engineering.

The extension service consists of the horticultural advisor and his 7

assistants, the staff of the research station also lending a hand. The advisory work is supported by articles in horticultural and local papers and popular folders.

Horticultural educations at Boskoop can be obtained in different ways.

- a) The secondary horticultural school, corresponding with the 4 year secondary school, has a 3 year course. The students are working in the nurseries one day a week and half a day attended instructions at school. The college affords a thorough training in horticulture (especially arboriculture) much attention being given to general education (3 foreign languages, economics, surveying, botany, dendrology, phytopathology, chemistry, manuring, pedology, physics, horticultural engineering, etc.).
- b) The college for landscape-gardening, corresponding with the horticultural college, has a 4 year course.
- c) The primary horticultural school corresponds with the ordinary elementary school. It affords a fundamental training in arboriculture. It has a 4 year course: during the first and second year lessons are given 5 days weekly, the two following years 4 and 3 days weekly.
- d) The evening-classes are the most elementary form of horticultural tuition. They correspond with the elementary school. Lessons are given two years, 3 evenings weekly.