DEVELOPMENT AND ORGANIZATION
OF THE BREEDING OF AGRICULTURAL CROPS
IN THE NETHERLANDS

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In 1886 L. Broekema crossed the English Squarehead wheat with the Dutch local variety Zeeuwse Witte (Zeeland White). The Spijk wheat resulting from this cross was crossed again with Squarehead and from the hybrid population resulting from this second crossing some lines were selected which were mixed and introduced under the name of Wilhelmina.

Broekema was a teacher and later Director of the Government Agricultural School at Wageningen, the precursor of the present Agricultural University. Among other subjects he lectured in dairying and animal husbandry, while with primitive means and on a small trial field he practised plant breeding as a sort of hobby. Although he mainly worked prior to 1900 yet in his methods we find some principles which even now are modern.

The great success of Wilhelmina wheat has not failed to rouse the Government's interest in plant breeding. The results of the breeders Mansholt, Veenhuizen and Kuhn have also contributed to this interest.

At the time when Wilhelmina wheat was making its triumphal march new possibilities were opened and great expectations were roused by the rediscovery of Mendel's laws. In addition services for the inspection of crops were established in various parts of the country shortly after the turn of the century. This led to the need of more knowledge and a better information on varieties.

All these factors can be mentioned as motives for the government to add an Institute of Agricultural Plant Breeding to the then Government Higher Agricultural, Horticultural and Sylvicultural School at Wageningen, in 1912. This Institute, which I will call I.v.P. for short, is still part of the Agricultural University. In 1918 a separate chair for plant breeding was established, by which act plant breeding was included as a new branch of science. The professor of plant breeding is also director of the I.v.P.

In the regulations of the I.v.P. the breeding of new varieties was mentioned under its activities. Yet the workers have devoted their time more to information to breeders and farmers and to performing scientific research. As private persons began to pay more attention to plant breeding it has become the aim to help these breeders by giving them advice, breeding material and hybrid populations. Several varieties which have become widely distributed in the Netherlands were selected from material supplied by the I.v.P.

My predecessor Prof. C. Broekema, son of the afore-mentioned Prof. Dr. L. Broekema, has taken much trouble to give the farmers objective advice on varieties. He instituted the List of Varieties in 1924. First and foremost order had to be restored to the nomenclature and an end put to the use of synonyms. Rightly it was considered to be of the utmost importance for reliable trials and correct advice to introduce a variety
under one name only. The List of Varieties has been improved continuously and at the moment it is not only a reliable guide to the farmer and seedsman, but also to numerous other persons and institutions. It soon became the basis for crop inspection while also for the breeder it served as a source of valuable information. Since 1942 it has been compiled at another institute which I will mention later.

The present task of the I.v.P. can be presented as follows.

1. Instruction to students.
2. Free scientific research.
3. Information and help to breeders.
4. Cooperation with other institutions which are connected with the breeding of varieties.

In 1948 a new organization was founded which also performs research in the field of plant breeding. It was called Foundation for Agricultural Plant Breeding. However, for a clear understanding it is necessary to mention first some details on the development of plant breeding.

In the course of years the number of breeding establishments in the Netherlands has gradually increased. The new establishments have been founded partly by agricultural organizations, agricultural cooperations or united factories, partly by independent firms which are running a seed trade or a farm.

In the case of the potato it can be established that, apart from some large breeding stations, many persons are raising new varieties as a hobby. Whereas about 1920 there were some 4 or 5 potato breeders who raised about 2,000 seedlings, to give a rough estimate, at present there are 240 in all, including large and small establishments and the annual number of seedlings produced can be estimated at some 400 to 500,000.

There has also been a tendency at bigger establishments to work on a much larger scale and, in addition, many new aids have come into use such as glasshouses, small laboratories and all sorts of machines. At the same time it has become the custom to put university graduates in charge of breeding work. Many of them had their education at Wageningen and they sometimes even like to return to their Alma Mater.

After the second world war all sorts of new problems arose. More than in former days attention was increasingly directed to information based on scientific research. There was also a growing demand for new material as a consequence of the fact that much attention was being paid to the breeding for resistance; some problems required an equipment and specialization which could not be paid by each separate breeding establishment. The I.v.P. as part of the Agricultural University could not comply with these demands and, moreover, any institute for higher education (University) will insist on retaining its freedom of scientific research.

The result of these considerations was that in 1948 a new Institute was founded, viz. the Foundation for Agricultural Plant Breeding, to be shortened as S.V.P., which at first was housed in the I.v.P. building, but later had a new wing added to the old building. Both institutes are still headed by one Director, but in the near future they will be split up.