

THE BIOLOGICAL BASIS OF THE PLANT IMPORT LEGISLATION OF ENGLAND AND WALES

BY

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Just thirty years ago in the summer of 1928 a shy young man, bewildered by the strangeness of his first journey outside Great Britain, stepped from a train at Haarlem. Here he was met by Prof. VAN SLOGTEREN, who not only put him at his ease long before they reached Lisse but continued to place most of his time for the next week or so at the disposal of his guest, despite the evident signs of a very busy life and the preoccupations consequent on the recent heart-breaking loss of his laboratory by fire. The experience left me with a sense of gratitude and admiration that has never been erased.

My chief interest at that time was in bulb diseases, but coming as I did from the technical headquarters of the English Phytopathological Service at Harpenden, there were naturally other matters of mutual interest to discuss and not least of them the question of plant disease legislation. Prof. VAN SLOGTEREN had already taken an active part in a discussion on this subject during the International Conference of Phytopathology and Economic Entomology held in Wageningen in 1923 (Report, 1923, p. 220) and he was later to return to the topic on at least two occasions (VAN SLOGTEREN, 1929, 1935). Broadly speaking he accepted the right of nations to require that plants and plant products moving in international traffic should be reasonably free from pests and diseases, but insisted that restrictions on free exchange should be on a sound biological basis and that agreements for exclusion or prohibition must be based on purely scientific phytopathological grounds. He was not, of course, the first nor yet the last to put forward general principles of this nature, and it may be an appropriate moment to indicate how one country, and that a mainly importing one, has endeavoured to put them into effect.

At the Wageningen Conference of 1923 the late Sir JOHN FRYER, then Director of the Plant Pathology Laboratory at Harpenden, speaking of the difficulty of defining the extent to which the pathologist should concern himself with economic factors, said (Report, 1923, p. 222): "In England, I think, the solution which would commend itself to most entomologists and pathologists is that they should first endeavour to obtain the fullest knowledge of the economic questions involved in the international trade in plants, and secondly that they should use this knowledge so as to reduce to the smallest possible extent (consistent with reasonable safety) the interference with commerce by plant import regulations. This, at all events, was in the minds of those responsible for drawing up the English regulations now in force, which we earnestly hope will contrive reasonable safety for England with the minimum interference with trade."

The general principles outlined above, and re-emphasized in recent years (MOORE, 1952, 1953) have provided the basis for successive Importation of Plants Orders issued by the Ministry of Agriculture, Fisheries and Food, which have governed the entry of agricultural and horticultural plants and parts of

plants into England and Wales. Changes have been made from time to time in the light of experience and new biological information, and such changes have taken the form of relaxing restrictions no longer thought to be justified or of new restrictions. The Importation of Plants Order 1955 is the latest consolidation of our import regulations.

Under this Order many raw vegetables and fruits as well as practically all kinds of seeds are allowed unrestricted entry into England and Wales. At the other extreme potatoes and a few other plants are prohibited from certain countries or continents. The potato is a vital part of our national economy and the rather stringent measures we impose on its importation are prescribed to prevent the introduction of ring rot (*Corynebacterium sepedonicum*) and a number of important virus diseases not known to occur in the United Kingdom, including spindle tuber and yellow dwarf. The other prohibitions are on imports of annuals, biennials, *Prunus*, *Rubus*, *Fragaria* and *Rosa* from those countries in which there exist dangerous virus diseases unknown in Britain, such as aster yellows, curly top, rose wilt and certain stone fruit virus diseases. Special precautions against cherry fruit fly (*Rhagoletis cerasi*) are taken by excluding raw cherries altogether during the worst danger periods, and admitting them at other times under a guarantee of freedom from larvae of the fly. The only seeds subject to restrictions are those of lettuce, tomato, and pea, which must come from crops free from one named disease. Restrictions on the entry of nursery stocks, bulbs and certain leafy vegetables are designed to meet one or both of two objects. The first is to ensure that the importer is receiving goods which are as healthy as can reasonably be expected. Exporting countries are therefore asked to certify that plants consigned to England and Wales were examined during growth (mainly for virus diseases) and again just before export, and were found on both occasions to be reasonably free from injurious pests and diseases. The second object is to avoid the introduction of Colorado beetle (*Leptinotarsa decemlineata*), San José scale (*Quadraspidiotus perniciosus*) and potato wart disease (*Synchytrium endobioticum*), and this is sought by laying down certain requirements about the place of origin of the plant material. The health certificate asked for is in the form of the model certificate laid down in the F.A.O. International Plant Protection Convention of 1951. It certifies that the consignment is substantially free from injurious pests and diseases, and guarantees conformity with our current phytosanitary regulations.

An important feature of English import legislation is the reliance placed on the goodwill and integrity of the Phytopathological Service in the exporting country. We accept the health certificate in good faith and, unlike many countries, do not carry out a routine examination of all consignments on arrival, though a small percentage of them is regularly inspected as a check on the validity of the certificates issued. Moreover, we do not ask for any additional declaration to be made on the certificate. In general, therefore, our plant import legislation is essentially a compromise designed on the one hand to protect us from certain pests and diseases which we do not have, and on the other to reduce to a minimum the barriers to trade. We realize our good fortune in that, as the British Isles are surrounded by water, we enjoy a natural insulation from many pests and diseases which is denied to countries with land frontiers. But we also recognize that, however worded, health certificates can never provide absolute guarantees, and therefore take the more realistic line that if producers in other

countries wish to develop a long-term trade with us it is their primary duty to do everything in their power to eliminate pests and diseases on their own premises.

Though several years may elapse between one consolidated Importation of Plants Order and the next, the position does not remain static during the interval, and amending legislation may be issued at any time. On the one hand it has become customary to issue annually an amending Order which permits relaxation, usually on an experimental basis, of some of the restrictions on the import of fresh vegetables laid down in the main Order. Such temporary relaxations may become permanent, or may be withdrawn or amended in the light of the experience gained during the experimental period. On the other hand fresh restrictions may be both desirable and fully justified, as for instance in 1956 when it was found that a new bacterial disease (slow wilt) was being repeatedly introduced into England with imported carnation cuttings. The important thing is that relaxations to foster trade are made – even if cautiously – as soon as they can be with reasonable safety to our crops, and new restrictions are not imposed unless they are felt to be justified on biological grounds. One or two examples may suffice to show how we approach the problem of changing conditions.

In the early thirties, when Colorado beetle began to spread rapidly from the Bordeaux area north-westwards through France, the drastic measures that had been taken ten years before to protect our island were intensified, especially after a number of beetles had been found at Tilbury in 1933 (FRYER, 1934). The position became acute when trade was resumed after the 1939–45 War, for by then the beetle had reached other western and southern European countries. There was no evidence that it could cross the Channel by direct flight and it was believed – and confirmed subsequently by THOMAS (1952) – that the number of colonies of beetles found in potato fields in this country was correlated with the number of single beetles carried here with imported produce or in other ways. The peak was reached in 1947 when 224 single beetles were detected and 57 colonies of beetles were observed in potato crops. To meet the peril very stringent restrictions had to be placed on the importation of agricultural produce from the Continent from February onwards, and these undoubtedly interfered considerably with normal trade. The story since 1947 has been one of gradual but progressive easement of most of these restrictions, based mainly on the dates of emergence of the beetle from the soil in the various infested countries, on knowledge acquired about the kind of produce most likely to harbour beetles, and above all on the extent to which active control measures are taken in the exporting country. The greatest risk arises with produce from southern Europe where emergence takes place early and the period of dormancy is short. Leafy vegetables are always prone to harbour beetles, but the greatest danger lies with imported lettuce. Accordingly, our general policy has been to maintain strict control over imports of lettuce, to relax somewhat with other leafy vegetables, and to remove restrictions altogether on certain other produce. At the same time the radius requirements originally imposed are gradually being withdrawn in favour of those countries where an intensive system of beetle control is maintained. All this has been made possible largely because of the successful efforts of the European Plant Protection Organization and its parent body, the International Colorado Beetle Committee, to foster both national and international collaboration in fighting the beetle. It is because of the improved position on the Continent and vigilance at home that we are now able to claim that since 1952

no beetle colonies at all have been seen in potato crops in Britain and that the number of single beetles detected each year has fallen below the 50 mark.

Another pest which threatens this country and which it is believed could be very harmful if it obtained a foothold in our orchards is the cherry fruit fly (*Rhagoletis cerasi*). Control over the import of raw cherries has been exercised for over thirty years: until 1954 by a series of special annual Orders and subsequently under the Importation of Plants Order. During most of this period cherries accompanied by a certificate of origin have been allowed unrestricted entry until certain dates, after which they have been prohibited. The prohibition dates were originally selected and later amended in accordance with current information about the date of emergence of the fly in the exporting countries or regions, and in part on the results of check inspection carried out at the port of entry. In 1954 a notable change was made. The certificate of origin and dates of prohibition were retained, but it was decided to require that, in addition, all consignments of raw cherries arriving from Europe before those dates should be certified free from the larvae of cherry fruit fly. If experience shows that the assurances given on the certificate are met the prohibition dates will gradually be extended until there is no restriction on entry: if not, it may be necessary to consider prohibition from an earlier date. Here again, therefore, the exporting country has it in its own power to facilitate its trade with Britain by ensuring adequate control of a pest within its own boundaries.

REFERENCES

- FRYER, J. C. F., - 1934. Colorado beetle at Tilbury. J. Minist. Agr. Lond. 40: 907-912.
MOORE, W. C., - 1952. Principles underlying plant import and export regulations. Plant Path. 1: 15-17.
MOORE, W. C., - 1953. International trade in plants and the need for healthy planting material. Rep. 13th intern. hortic. Congr. 1952, 552-558. Reprinted in J. roy. hort. Soc. 78: 454-462.
REPORT, - 1923. Report of the International Conference of Phytopathology and Economic Entomology, Holland, Wageningen.
SLOGTEREN, E. VAN, - 1929. The biological basis for the international movement of plants and plant products. Proc. int. Congr. Pl. Sciences: 1343-1346.
SLOGTEREN, E. VAN, - 1935. Plant quarantine and international co-operation in scientific research. Proc. 6th int. bot. Congr.: 185. See also Lab. voor Bloembollenond. Lisse, Meded. no. 53.
THOMAS, I., - 1952. Colorado beetle in England in relation to its spread on the Continent. Plant Path. 1: 103-108.