It would then be possible for each Government to adapt its importation regulations to the conditions prevalent in the country whence the produce is imported.

The survey which it is suggested should be made is a simple one, since every Agricultural Department is engaged in collecting information regarding the economic pests of its own country. The pests should be divided into three classes: (1) Pests which are widely distributed and well established; (2) pests which are liable to become epidemic or are not well established; and (3) pests which are rare or recently discovered.

The division is, of course, artificial, and pests may pass from one category to the other in course of time. In order to decide in which category the pests should be placed, and to estimate their real economic importance, workers in each country should be invited, when making investigations for their own or for general information, to adopt a uniform plan, and the method suggested is as follows: Not only should the life-history be studied, as is, of course, done by all economic entomologists, but the course of the disease should be recorded as it affects the plant. Both the extent of the disease in each country and its intensity in each locality should be recorded on a scale (it is suggested) of five degrees. This system is already in use by the British Board of Agriculture for certain pests, and has been found very convenient. Theoretically, disease begins when the first insect attacks the host, and ends with the death of the host; but in practice we may say it begins when the first sign of ill health is noticed by a moderately expert investigator without the aid of a microscope, and ends when the plant is economically of no value. At a stage half-way between these two points disease is "general," above this point it is "bad" and "very bad," below it is "slight" and "very slight." The very least degree is "a trace." By studying the course of an epidemic or serious disease, certain stages can be discovered which may be described as "very bad," "bad," "general," "slight," "very slight," respectively. Under this system, which is, of course, artificial, the Board has been able to say not only in what districts of Great Britain American gooseberry-mildew exists, but also in which places it is "bad," "general," or "slight." On a similar scale, reports are made as to the extent of disease on a given area, stating whether diseased plants are "very many," "many," "common," "few," or "very few." Somewhat similar results are being worked out as regards wart-disease or black scab of potato. The Board is therefore able to say what parts of the country are affected and which parts are seriously attacked, and thus provide a correction of the alarmist reports which have appeared from time to time in the Press. Most investigations into plant-diseases show the area affected, but it is believed very few show the intensity of the attack. It is suggested that scientific workers throughout the Empire should be invited to work out a similar scale of the pests of their country, and publish the results.

The following sample return is appended in order to illustrate the kind of information which might be supplied in the preliminary lists of pests:—

SAMPLE RETURN OF CROP-PESTS.

Insect-pests of Cotton in India.

Insects attacking the Young Plant.—A grasshopper (*Chrotogonus brachypterus* Blanch.) and probably other species attack the plants when quite young. (Specimens are sent.)

A caterpillar (*Agrotis ypsilon* Hübn.) and rarely other species of *Agrotis* and *Euxoa* attack the young plants. An account has been published in the Memoirs of the Agricultural Department (Entom. Series, vol. i).

Stem-borers.—A buprestid beetle (*Sphenoptera gossypii* Kerr.) attacks the half-grown plants, the larva boring in the stem and killing the whole plant. Only the indigenous varieties are attacked, and not the tree-cottons. The pest occurs commonly in Bombay and the Central Provinces, less so in the Punjab and United Provinces, very rarely in Bengal, and sometimes is common in Madras.

A weevil (*Pempheres affinis* Fst.) is found abundantly in the stems of cotton of all kinds, particularly the tree-cottons, Egyptian and American cottons, and any kinds that are long on the ground; the larvæ are found in the stems near the soil-level, and cause swelling of the stem there. The attacked plants do not thrive, and break off in any wind. The pest is a very serious one in tree-cottons or any cottons that are grown for more than six mnoths; it is known in Bengal, the United Provinces, and Madras.

Another weevil (*Alcides leopardus* Oliv.) attacks principally tree-cottons, the larvæ boring in the branches and twigs mainly, and not doing much damage as a rule. It has been a serious pest in some experimental cultivation of tree-cotton, and probably occurs in all parts of India.

Bollworms.—The American bollworm (*Heliothis armiger*) is a common insect, but has never been found in cotton-bolls in India, and only once found feeding on the buds of the cotton-plant; it cannot therefore be put down as a cotton-pest. Nor can the pink cotton-seed caterpillar (*Stagmatophora coriacella* Meyr.), which feeds exclusively in the old bolls left on the plant, and which never attacks the green boll nor the seed-cotton picked at maturity in the ordinary way; this is necessary to note, as the allied Egyptian species (*S. gossypiella* Wals.) has been referred to (? rightly) as a bollworm.

Earias insulana Boisd. and *E. fabia* Stoll. are the common bollworms, with *Gelechia gossypiella* Saund., all occurring in the green boll, which they destroy more or less completely. *Earias* is also found in the shoots, and never in the seed; while *Gelechia* is common in the seed after plucking (where it often hibernates) and is only otherwise known to breed in some wild *Malvaceæ*, such as *Thespesia populnea*. *Earias insulana* is the species which has been responsible for the most serious and widespread damage, though all three species occur all over India and Burma.

Leaf-eating Caterpillars.—No species does serious harm, though both *Laphygma exigua* and *Prodenia littoralis* occur widely in India on other crops.