means that the protective structures and living matter are reduced to a minimum, while the cells are charged with sugars, acids, and other substances which stimulate the growth of parasitic fungi. Every effort should be made by the grower to secure varieties which are not only commercially desirable, but which have been shown by experience to be resistant under local conditions to the diseases of the locality. In the case of short-lived plants, it is often possible for a grower, by the use of a little care in the selection of seeds or tubers from resistant plants, to develop a strain greatly improved in resistance under the grower's own conditions.

GENERAL METHODS OF PREVENTION.

(1.) Endeavour by proper cultivation, pruning, fertilization, etc., to keep the plant in a thrifty, vigorous condition. This does not mean *forcing*. The production of an excessive sappy growth is one of the most important conditions predisposing to disease, and one which the cultivator in irrigated districts is especially tempted to bring about.

(2.) Collect and burn diseased parts of plants, crop refuse, prunings, etc. Many parasitic or partially parasitic fungi can exist for an indefinite time as saprophytes on such material, only waiting the opportunity to once more attack living plants. Such refuse also harbours all manner of insect pests.

(3.) Try to avoid the first introduction of disease into your land or orchard. Go to some pains to get your stock from a nursery or other source free from disease. Reject any plants that are diseased at the time of setting out. Many diseases are carried in or on seeds and may be widely spread in this way. In some cases it may be advisable to disinfect the seed by soaking it for fifteen minutes in a 1 to 1,000 solution of corrosive sublimate. This will do much to prevent the introduction into this Province of such diseases as club-root or finger-and-toe of cruciferous plants.

(4.) Practise rotation wherever possible. Where a crop has been attacked by some disease, follow it, if possible, for two or three years by crops immune to that disease. In this way many parasites may be starved out. Even where this is not possible owing to the omnivorous character of the parasite, much good may yet be done, since a fungus capable of attacking different crops often becomes increasingly virulent towards one particular crop if allowed to grow and reproduce for generation after generation on that crop.

(5.) *Spraying.*—This is dealt with more fully in another part of the bulletin. Sprays applied to woody deciduous plants during the dormant season are generally made strong enough to kill all spores with which they come in contact. Such sprays, however, are usually so strongly caustic or poisonous that they work serious injury to the soft green parts of plants. Hence sprays adapted for use during the growing season have to be made much weaker. The spray material in this latter case forms a continuous thin layer over the surface of the plant through which the fungus-hypha from a germinating spore must make its way, and in attempting to do so is killed. Spraying of this kind is entirely protective, and must obviously be repeated often enough to keep the film of spray material there and to protect the new growth. It must also be even enough to avoid the occurrence of unprotected spots large enough for a fungus-spore to fall and germinate without coming in contact with the spray film. When the minute size of fungus-spores is considered, it will be realized that this means very thorough spraying. Once a parasite has obtained entrance to a plant spraying can do little or nothing. It is now amongst the cells of the host-plant, and anything which would reach and kill it there would also kill the plant-tissue, so that in a very real sense the cure would be worse than the disease. Superficial parasites like powdery mildews may, however, in some cases be killed by spraying even after they have got a foothold.

(6.) Promptly report and send in for identification any disease with which you are unfamiliar. By doing so you may be rendering the Province a service in reporting the first appearance of a disease which may still be prevented from establishing