

DISEASES OF ORNAMENTALS

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Mr. Chairman, Ladies and Gentlemen:

The subject of this talk, diseases of ornamentals, is a term frequently used in conversations and discussions, spoken glibly as though it were a simple matter, clear-cut and uncomplicated. Actually nothing could be farther from the truth. I would like to give you some idea of its complexity, its importance and what has been done and is being done towards its solution.

The value of ornamental plants in Florida is enormous. I have no conception of what it amounts to in dollars and cents but I am sure it runs into tens of millions. You have heard previous speakers hint at the size of the gladiolus and easter lily industries in the State. Those are only two of many crops classed as ornamentals. Gladiolus is the leading cut flower grown in Florida, but there are many others. For instance Asparagus "fern" alone is cut annually from a large acreage.

The florists of Florida grow thousands of acres of flowering plants for their local trade. Not only is the winter business in this line important but there is now enough summer demand to make it an all-year proposition. Another branch of this sort of horticulture is the growing of plants to be shipped to northern markets as potted plants. A commercial enterprise of long standing is the nursery business. Although the investment of nurserymen in azaleas and camellias alone is tremendous these two plants constitute but a small part of the varied stock that must be grown and carried for landscaping in Florida.

So far we have been talking about com-

mercial plantings. Private and semi-private installations are almost as important. City parks are frequently landscaped with exotic ornamentals, sometimes with rare plants as in the Bay Front Park in Miami. Such developments as Cypress Gardens and Ravine Gardens employ ornamental plants by the acre. Hotel plantings are frequently extensive and some of the better tourist-cabin grounds are now being landscaped extensively. However it is around private homes where the greatest number of ornamental plants are used. There are literally thousands of miles of Florida streets lined with homes, each landscaped to the owner's taste with shrubbery or flowering plants. The total value of all these plantings is enormous.

All plants are subject to disease and on ornamental plants, disfiguring diseases are especially deleterious. Since many diseases are confined to one or a few species of plants, the number of diseases to be dealt with in any area is directly proportional to the number of species present. Florida's climate and geographical location are so beneficial that over 3500 species of plants grow here naturally. These same factors favor the growth of a much larger number of exotic or introduced species, most of which are ornamental plants. In addition, certain agencies of the United States Department of Agriculture and some private individuals are continually bringing in and distributing new species. As the number of species grown here becomes greater, the disease problem becomes larger and more complicated. This is certainly true when a new species is grown in larger numbers, especially when concentrated in one or a few localities.

Diseases vary too, depending on the class of plant that is attacked. Trees and shrubs are likely to be susceptible to diseases very

different from those attacking herbaceous perennials. Therefore the nurseryman will have to deal with diseases different from those combatted by the florist. The plantsman growing annuals has still a different set on his plants. Bulb growers can expect quite different fungi to attack their crop. Here in Florida many tender foliage plants are grown under shade and play host to still another array of parasitic organisms.

The disease may be classified still further according to the parts of the plants attacked. To begin with there are the so-called damping-off diseases that attack seedlings and very young plants for the most part. They vary greatly in nature and control from the root rots of woody plants such as shrubs and trees. Those fungi which attack stems constitute another category altogether different. Leaf-spotting diseases are almost as numerous as the kinds of plants. Occasionally fungi attack blossoms and we have a very serious condition as with the azalea flower spot disease. We can add to these the mildews, powdery and downy, the rusts and all the virous diseases such as mosaic, rosette, etc. These are only the diseases caused by parasites. We have as well the physiogenic troubles due to the action of toxic chemicals, deficiencies of certain elements and the water-induced abnormalities.

Truly we have a complicated problem under discussion, one that reveals few of its ramifications in that common expression "diseases of ornamentals."

You may well ask what is being done about it. Dr. Magie has outlined some of the work that is going on at the Bradenton Station, work dealing with only some of the phases of the gladiolus disease problem. He was preceded by other pathologists in the same field. Camellia diseases are under investigation at the Main Station in Gainesville. Money is available for another man to work on diseases of ornamentals at Gainesville but so far no capable pathologist has been found to take the position.

Many of the diseases of our Florida plants have been studied elsewhere and control measures worked out. In some cases these can be adapted to Florida conditions, for instance, when the work was carried on in another Southern State. On many other diseases there is no published information in this or any other country. Moreover many of the newer fungicides may be more effective in certain cases than the old established bordeaux and similar sprays, but we don't know. With the organic fungicides, each individual case must be worked out. The job of learning how best or even how to control the diseases of ornamental plants in Florida is a large and important one. It will not be completed this year nor next.

"BULBOUS PLANTS ADAPTED TO FLORIDA"

By WYNDHAM HAYWARD
Winter Park

The growing of bulbs, tubers, tuberous-rooted and rhizomatous plants in Florida is one of the more or less neglected phases of ornamental horticulture in our wonderful "Sunshine State," and in the very beginning of my remarks I would like to say that I believe we are fifty years behind the times in that phase. To the regret of all sincere

flower lovers and plantsmen, the recent World War II has given it another serious setback.

The number of bulbs, tubers, cormous plants, etc., which may be grown successfully in Florida is legion, but only a few of these have come to the front as important commercial items, as gladiolus, the calla lilies, Polyanthus Narcissus, hybrid Amaryllis, Fancy Leaved Caladiums, Easter Lilies, Hemerocallis, Gloriosas, and a few others.