

Etiology and Control of Celery Diseases in the Everglades

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The celery industry in south Florida is a complex two-phase process consisting of seedbed and field operations. Although the duration varies with the season, each of these operations constitutes an approximate three-month period. Thus, six months are required normally to produce a crop of celery. Seedbeds in recent years have been started as early as May and successive plantings are made into November and December. The first crop usually comes off in December and celery is harvested into June of the succeeding year. Thus, the industry not only has become a year-round operation but actually comprises as much as a two-month overlap from year to year.

Diseases constitute a serious limiting factor in celery production both in the seedbed and in the field. In fact, successful production is dependent upon control of these diseases. Accepted control programs appeared to be inadequate. This was due, in part, to improper methods of application (coverage). In addition, the causal relations of some of the diseases were not understood clearly. As a result, it was not uncommon for a grower to be spraying for a disease of mistaken identity. This often led to mis-use of materials.

Several needs were apparent: 1) clarification of symptomatology; 2) establishment of causal relations where necessary; and 3) development of a "catch-all" spray program—one that would ensure protection from all diseases in the seedbed and in the field. This bulletin presents the information gained from a research program covering the period 1954-57 that was designed to fill these needs.

SYMPTOMATOLOGY

Damping-off.—Due to the fact that seed are sown on the soil surface, pre-emergence damping-off is relatively unimportant in the celery seedbed. As would be expected however, due to the three-month duration of a seedbed, post-emergence damping-off is a serious problem. It occurs in two distinct phases: early post-

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