covered much less frequently, while *Rhizoctonia* was only rarely isolated (Table 1).

In greenhouse pathogenicity trials, isolates of *Fusarium* caused red root, vascular discoloration, yellowing and death of the plants. *Pythium* isolates caused a watery root rot and stem rot, as frequently observed in the field, but did not cause typical red root.

It is concluded from these data that *R. solani* is the causal agent of late post-emergence damping-off of celery. Of the fungi isolated, *Fusarium* is the dominant one involved in the red root and yellows diseases. *Pythium* is of much less importance and *R. solani* is very minor, if involved at all. The possibility of other causative factors cannot be ruled out, since better than 50 percent of the plant parts plated out did not yield pathogenic fungi. In several instances platings of red root material, that had been washed only in tap water with no surface sterilant used, yielded no growth on agar media. As a result of these and other observations, it is suggested that ectoparasitic nematodes may be involved in the etiology (*2*). Certainly, the red root symptoms would not preclude this possibility. *Pythium* sp. (p) is the primary agent involved in a certain type of early post-emergence damping-off, characterized by a soft stem rot.

Identification.—All the *Rhizoctonia* isolates fitted the description of *R. solani* Kuhn and are considered typical representatives of that species. The *Fusarium* isolates were of the *F. oxysporum* group [2] and are classified as *F. oxysporum* f. *apii*. No attempt was made to determine the species of *Pythium*.

SEEDBED DISEASES AND THEIR CONTROL

Due to their intensified culture, and to the fact that much of the seedbed period occurs during the rainy season, the production of disease-free seedlings has been a major problem in the Everglades. Indeed, celery could not be grown in the Everglades at all were it not such a hardy crop.

There are at least four major diseases of celery in the seedbed, and three of lesser importance. The four important ones are damping-off, early blight, bacterial blight and red root. The three lesser diseases are late blight, Fusarium yellows and anthracnose. Any or all of these diseases may appear simultaneously in a seedbed. Proper field diagnosis, therefore, is diffi-

[2] The writer is indebted to Dr. W. C. Snyder, University of California, Berkeley, California, for confirmation of the identity.