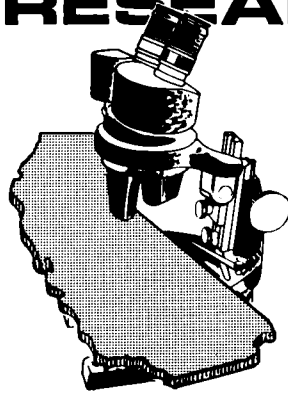


RESEARCH PREVIEWS



A continuing program of research in many aspects of agriculture is carried on at University campuses, field stations, leased areas, and many temporary plots loaned by cooperating landowners throughout the state. Listed below are some of the projects currently under way, but on which no formal progress reports can yet be made.



Asparagus plant propagated from the lateral bud of a spear.

Formation of callus tissue from spear internode section.

COTTON DISEASES

Field studies at Davis and in Central Valley test plots are being conducted to learn more about the control of *Verticillium* wilt and cotton leaf spot. The cause of the latter disease remains unknown. Efforts are also being intensified to discover materials and application methods that will provide improved protection against *Pythium* and *Rhizoctonia* infection.

EGYPTIAN ALFALFA WEEVIL

Entomologists and biological control specialists have teamed up to try to develop means of combating the Egyptian alfalfa weevil, which was recently discovered in the Central Valley.

RHIZOCTONIA ON STRAWBERRY

Plant pathologists at Berkeley have found that indexed, *Rhizoctonia*-free clones outperformed commercial stocks about two to one in strawberry field tests. The pathogen-free stock performed better in both growth and yield.

UTILIZING SOIL CRACKS

Noting that seedlings located near soil cracks can bypass hard crusts, soil scientists at Berkeley are studying means of inducing controlled crack formation soon after planting time to increase the probability of emergence.

CONTROLLED DORMANCY

Basic studies by pomologists at Davis indicate that dormancy is controlled in buds and seeds of fruit trees with one and the same substance. It is hoped that further knowledge of this compound may lead to an ability to break the rest in tree buds and seeds artificially, and to prolong it, thereby reducing the hazard from frost injury.

pH AND PLANT DISEASES

Experiments conducted at present in the laboratory only, lead Berkeley plant pathologists to think that there may be a relationship between available soil moisture and soil pH and the incidence of plant diseases. By changing the pH in laboratory solutions, the researchers were able to make certain disease-causing bacteria either cling to, or move away from, root wounds of plants submerged in the solution.

NEMATODES IN ORCHARDS

Periodic retreatment of prune and walnut orchards with DBCP seems to prolong the benefits of preplanting soil fumigation, according to Davis nematologists. Further experiments along this line are planned to try to develop knowledge on necessary frequency of application.

GRAPE FANLEAF VIRUS

Nematologists at Davis have controlled grapevine fanleaf virus in small plots by deep placement of high rates of soil fumigants. Larger-scale tests are under way to confirm these control results under commercial conditions. The cost of treatment is high but justified because of the extreme damage caused by the disease.

SYSTEMICS VS. NEMATODES

Greenhouse tests are being made by Davis nematologists to try to develop systemically active chemicals for the control of nematodes. So far, none has been found but the work is continuing.

PEPPER VARIETIES

Varietal tests are under way at the West Side Field Station to try to develop a strain of peppers that will set fruit successfully during the periods of high temperature that are normal to the San Joaquin Valley during the summer.