

# MOSQUITO RESEARCH, UC RIVERSIDE



REARING "PONDS" being inspected by Entomologist George P. Georghiou are part of an experimental program at University of California, Riverside, involving the world's largest collection of insecticide-resistant mosquitoes. More than 20,000 mosquitoes (of 15 strains) are reared each day in escape-proof rooms of the laboratory. Particular research emphasis is on the hardy mosquitoes of the Central Valley. The pasture mosquito, *Aedes nigromaculus* has shown more resistance to chemicals than *Anopheles*, the malaria mosquito. In Central America, *Anopheles* is beginning to show resistance to new insecticides in addition to resistance to DDT and dieldrin.

Resistance has made the useful life of an insecticide much shorter now than it was 10 years ago because the insects that have "learned" to resist one member of a group of insecticides are faster in acquiring resistance to other members of that group. Alternative methods are being sought urgently—methods such as biological controls, genetic controls, and the use of hormones and attractants.

Only a few materials that already have government approval are left for use and further research is being hampered by high development costs, uncertainty about future regulations, and insect resistance. Some of the alternatives being researched—such as hormones to prevent maturing of mosquito larvae, repellants to prevent egg laying in regular breeding grounds, production and release of sterile males to compete with natural fertile males—look promising. But their use is still several years away, and chemicals will be needed for at least the next five years, says Georghiou.

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GUIDE TO TURFGRASS PEST CONTROL. Leaflet 209. This leaflet is designed to be used in conjunction with Manual 41 (described above), and to supply information concerning chemicals that can be recommended for use in controlling turfgrass pests. This leaflet will be revised and reissued as often as necessary to keep it current.

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William W. Paul ..... *Manager*  
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California Agriculture

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