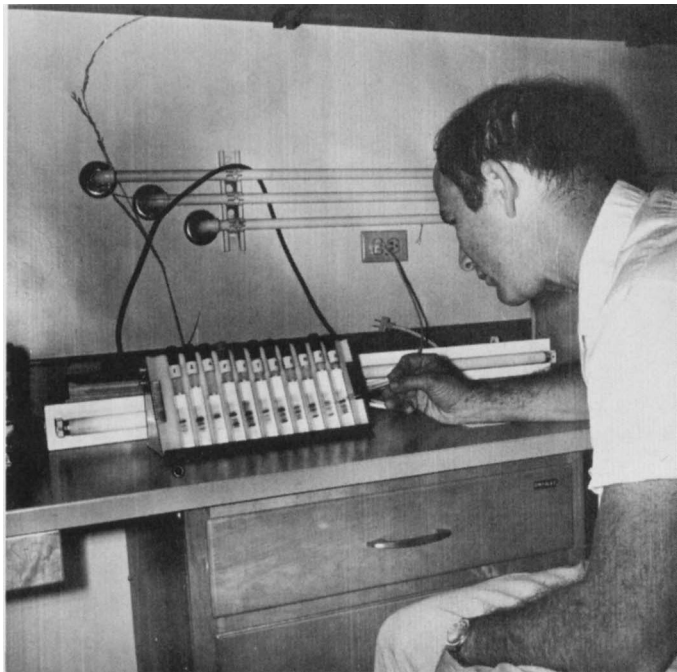
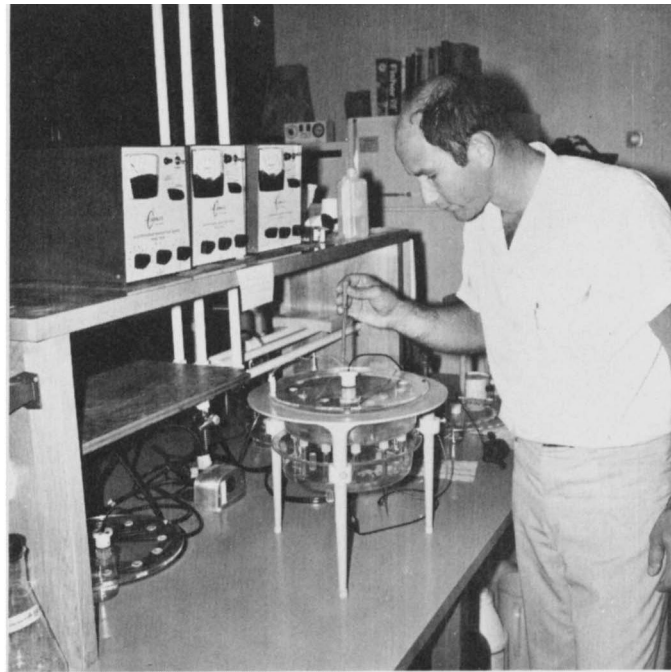


Wheat-Oats Genetics Research at U. C. Riverside

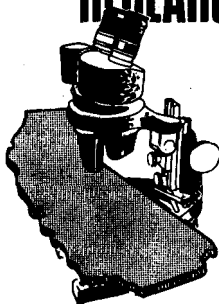


The wild ancestors and near relatives of our cultivated plants comprise a gene pool resource which, if conserved, can be tapped indefinitely to meet the threat of epidemics or the demand for better quality in our crops. One of the largest and most complete collections of wild wheats and related species has been assembled at the University of California, Riverside. In cooperative studies with entomologists and biochemists this collection is currently being screened by Geneticist Lennart Johnson for genes governing resistance to the greenbug, now rampant in the United States, and for genes determining high



protein content and a favorable amino acid balance in the grain. Relationships among species and variability within them are revealed by the pattern of bands (test tubes in left photo) produced by electrophoresis of seed protein extracts. These patterns show that genetic variability present in the wild progenitors has been lost in the process of domesticating plants. Visiting Geneticist Gideon Ladizinsky of the Hebrew University, Jerusalem is shown (right) applying the technique of electrophoresis to a study of his collection of wild and cultivated species of oats.

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.

AVOCADO BREEDING

Plant pathologists at Riverside have been carrying on research aimed at establishing sources of avocado seeds and budwood free of sun-blotch disease for experimental and commercial use.

MECHANICAL STEMMING OF STRAWBERRIES

Agricultural engineers at Davis are developing a machine that will mechanically stem strawberries. Mechanical stemming may even improve fruit quality while reducing harvest costs.

IRRIGATION WITH WASTE WATER

Scientists in the Department of Soil Science and Agricultural Engineering at Riverside are studying waste water from several different drainage sources (cattle feedlots, the city of Indio, agricultural drains from a variety of field crops) to determine if it could be suitable for irrigation purposes.

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William W. Paul *Manager*
Agricultural Publications
Jerry Lester *Editor*
Eleanore Browning *Assistant Editor*
California Agriculture

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