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AGRICULTURE  
AGR 101



THIRD CLASS  
BULK RATE

## New research projects

### Nutrient requirements

J.C. King, U.C. Berkeley, will investigate trace element utilization and requirements (i.e., zinc, copper and selenium) in young men and pregnant and nonpregnant women; evaluate the effect of pregnancy on protein and energy requirements; and ascertain the effect of alcohol on nutrient utilization and fetal development in pregnant mice. (Project # NTS 3663)

### Pesticide safety

The metabolism and detoxification of pesticides by enzymatic action in rodents will be studied by R.E. Talcott, U.C. Riverside, in an effort to uncover new approaches to selectivity. Effects of impurities in commercial pesticides will be investigated to try to identify those which, if removed, would increase the safety of the products. (Project # TXP 3651)

### Extending storage life of foods

Refrigeration and low temperatures extend storage life and maintain quality of many farm products, but many important food crops are injured by temperatures below 10°C. The objective of this study by

J.M. Lyons, U.C. Davis, is to apply recent findings on chemical modification of cellular membranes in controlling chilling response of sensitive products. (Project # XXX 3660)

### Genetic resistance to disease

The goal of this project is to determine the biologic mechanism for genetic improvement in resistance to specific avian diseases for which no method of control exists, or for which control may be improved by selection. The biological and genetic basis for general resistance to disease will also be studied. H. Abplanalp, U.C. Davis is project leader. (Project # AVS 3658)

### Land use planning

Recent research has indicated possible breakthroughs in cultivating certain agricultural crops on sandy soils by substituting seawater for freshwater irrigation. A project led by D.E. Hansen, U.C. Davis, will examine soil potential and possible areas of application of new technology and the economic feasibility of new cropping patterns as aids in land use policymaking and planning. (Project # AEC 2842)

### Reducing effects of air pollution

Plant geneticists at U.C. Riverside led by J.G. Waines will seek to identify the genetic mechanism of resistance of plants to air pollutants. Lines of known susceptibility and resistance will be utilized to identify the nature of genes involved in inherited susceptibility to ozone in green beans, lima beans, cowpeas, and potatoes. (Project # PLS 3670)

### Biological control

Objective of a project by L.E. Ehler, U.C. Davis, is to contribute to the ecological theory that underlies biological control, and to import, colonize, and evaluate exotic natural enemies of the insect pests of dried fig. (Project # ENT3657)

### Enhancement of nitrogen fixation

Genetic variation for biological nitrogen fixation in 250 cultivars of chickpea will be investigated by a team led by C.O. Qualset, U.C. Davis. Desired genetic traits will be utilized to breed chickpea with enhanced nitrogen fixation. Germplasm will be shared with world chickpea breeding programs. (Project # ARS 3654)