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THIRD CLASS
BULK RATE

Research in progress

Courses in safety

Increased grower interest has led to a series of farm safety training programs to train workers and employers in effective accident prevention and to help fulfill requirements of the Occupational Safety and Health Act. Robert W. Brazelton, farm safety specialist for UC Cooperative Extension, in cooperation with the California Farm Bureau and the State Compensation Fund, has held programs using farmer- and dealer-supplied machines for more than 2,000 farm employers and employees. The sessions conducted for farm workers are held in both Spanish and English.

In addition, many new safety publications have been printed for statewide dissemination, and taped messages were distributed to radio stations delineating safety requirements and ways to conform to them.

Community development

A community development division at UC Davis served as a center for several community agencies to work on problems whose solutions would assist rural communities in building solid foundations. While the number of problems facing these communities has increased significantly, the ability to cope with them has decreased.

Many groups such as the California Rural Affairs Council, the Federal Assistance Programs Retrieval System, the League of California Cities, and the Cali-

fornia Supervisors Association have tried to assist local communities in gaining access to resources available at the state and federal levels. Cooperative Extension, however, has brought all of these units together. The program is developing momentum and the university has decided through consultation with the Title V Council to focus the next three years' activity on the rural community and its problems.

Using "blowdown" water

Environmental scientists W. A. Jury and L. H. Stolzy at U.C. Riverside are studying the use of "blowdown" water, used to cool steam electricity-generating plants, to irrigate crops. The water has been considered too salty for such use, but researchers have found that some salt-tolerant crops such as sorghum, wheat, cotton, barley, and sugar beets can be grown with water containing in excess of 6000 mg/l (ppm), if very frequent irrigations are used when the region of water extraction by the plant roots has a high salt concentration. No yield reduction occurred in the first experiment on wheat for any of the salinity levels of irrigation water used. A field test of the process on a plot near a power generating plant has begun.

Recycling fly ash risky

In a study to evaluate potential effects of disposing of or recycling fly ash from coal-fired plants onto soil, U.C. River-

side environmental researchers report that incorporating as little as 1 percent by weight of the product can correct sulfur deficiencies, but that fly ash contains enough boron to damage sensitive crops if it is mixed with irrigated soils. Where soils were treated with fly ash at rates greater than 4 percent by weight, forage crops absorbed enough selenium and molybdenum (both found in high concentrations in fly ash) to render them unsafe for consumption by ruminant animals.

Burning crop residues

Smoke emissions from agricultural burning, especially on rice straw residues, have been reduced considerably because of research conducted by a UC Extension Agricultural Engineer from 1969 to 1974. County regulations for burning general crop residues are being instituted to further reduce the impact of agricultural burning on the environment. Other crop residues such as barley, wheat, oats, and corn appear to have the same requirements as rice with regard to the time of day they are burned, the moisture content at the time of burning, and fire management. Strip lighting back-fire burning generally reduces emissions by approximately 50 to 75 percent when coupled with burning at moisture contents of 10 to 12 percent or less. Studies conducted in 1977 on open burning of cotton gin trash—under prescribed conditions—indicate minimal impact on the environment.