Pitting and peeling losses in the 1954 season were substantially greater for smaller peaches than for larger fruit. For example, losses with the wire and knife pitters ranged from approximately 12% for small peaches to about 8% for large fruit. Similar variations were apparent for the torque pitter and both peelers.

Furthermore, losses were definitely influenced by the type of pitter or peeler used. With the torque pitter, losses were significantly lower than with the other two pitters. For example, with peaches of the two medium sizes, the difference in loss was about three percentage points-equivalent to some 60 pounds of fruit per ton of peaches.

Even greater differences were observed with the peeling operation. For most fruit sizes, the loss with the cup-down peeler was about half as large as with the immersion type. The difference, averaging some five percentage points, represents about 100 pounds per ton.

The data were also examined to determine the influence of maturity on pitting and peeling losses. Only with knife and wire pitting is this relationship definite and pronounced. With these pitters, losses were high on green peaches and low on ripe fruit. But with the torque pitter, losses for both green and ripe peaches were comparable to those obtained for fruit of medium maturity.

There was no tendency for peeling loss for ripe peaches to be different from that for fruit of medium maturity. Green peaches, however—especially with the immersion peeler—had a considerably lower peeling loss.

Cumulative Losses

Total losses during the pitting and peeling operations—beginning with peaches available at the pitting machine—can be determined for various combinations of machines and for different fruit sizes. For example, losses on peaches ungraded for size with the knife pitter followed by immersion peeling—giving the highest loss—can be compared with the losses from the torque pitter followed by cup-down peeling—giving the lowest loss in the pilot plant test.

The combined loss for torque pitting followed by cup-down peeling was approximately one third less than for the knife pitting-immersion peeling sequence.
SEEDING
Continued from preceding page

increase the fertility of the soil for the perennial grasses—a plant count survey was made to compare broadcast seeding and drilling with fertilizer.

At least 10 pounds of seed per acre were used with the broadcast method. The seeding rate was cut to six pounds per acre by drilling. An excellent stand was obtained with 2/3 as much legume seed and 3/4 as much grass seed by drilling, and the saving in seed cost helped to defray some of the expense of the fertilization.

Broadcast legume seed—without help from the phosphate fertilizer—produced small plants and set very little seed.

C. F. Walker is Assistant Specialist, Range Management, University of California, Davis.

B. L. Kay is Assistant Specialist, Range Management, University of California, Davis.

Farm Advisors, San Diego County, University of California, and personnel of the U. S. Forest Service, Cleveland National Forest, assisted in the studies reported here.

PEACHES
Continued from page 5

The reduction in loss averaged about seven percentage points. This means that a ton of fruit yielded an additional 150 pounds.

An additional allowance must be made for losses in weight that take place while the peaches are hauled from the grading station and stored at the plant prior to pitting. For the test period, an average shrinkage loss of 2.9% was observed.

This value may not be representative of normal operating conditions in commercial canneries. Peaches obtained for the test were hauled promptly from the grading stations to the plant, and handled rapidly at the plant. The total elapsed time averaged only 18 hours—considerably less than for peaches canned commercially. Certain other factors may have contributed to lower shrinkage losses for the test lots.

Results of the pilot test suggest that canner losses may be decreased appreciably below the levels now prevailing.

Jerry Foytik is Associate Professor of Agricultural Economics, University of California, Davis.

Sherman Leonard is Associate Food Technologist, University of California, Davis.

E. S. Luh is Junior Specialist in Food Technology, University of California, Davis.

The above article is based on a study undertaken jointly by the California Agricultural Experiment Station, the California Farm Bureau Federation, and the former Bureau of Agricultural Economics—now largely in the Agricultural Marketing Service—U. S. D. A.

A more complete report, the sixth in a series, entitled California Cantaloupe Marketing Channels and Farm-to-Retail Margins, 1949 Season, is available by addressing the Giannini Foundation of Agricultural Economics, 201 Giannini Hall, University of California, Berkeley 4.

CANTALOUPE
Continued from page 2

Spoilage, retail margins, and consumer prices vary among the stores surveyed. Location, size, and type of store provide a partial explanation for such differences.

Losses due to waste and spoilage tend to be higher in small cities, in small stores, and in independent stores than in large cities, large stores, and chain stores, respectively. Retail margins are usually higher in southern California, large cities, and independent stores than in northern California, smaller cities, and chain stores. Prices paid by consumers are considerably higher in small

stores and credit-delivery stores than in large stores and cash-and-carry stores, and somewhat higher in small cities than in large cities.

Jerry Foytik is Associate Professor of Agricultural Economics, University of California, Davis.

The above article is based on a study undertaken jointly by the California Agricultural Experiment Station, the California Farm Bureau Federation, and the former Bureau of Agricultural Economics—now largely in the Agricultural Marketing Service—U. S. D. A.

A more complete report, the sixth in a series, entitled California Cantaloupe Marketing Channels and Farm-to-Retail Margins, 1949 Season, is available by addressing the Giannini Foundation of Agricultural Economics, 201 Giannini Hall, University of California, Berkeley 4.

DONATIONS FOR AGRICULTURAL RESEARCH

Gifts to the University of California for research by the Division of Agricultural Sciences accepted in September 1955

BERKELEY

Chemagro Corporation ........................................ 2 gals. Synox For melon insect investigation

Larvacide Products ........................................ 100% Larvacide For research on sweet potato diseases

National Preservers Association ......................... $1,500.00 For color retention research

Rohn & Haas Co ........................................ 56% miticide FW 293 For melon insect investigation

Velisco Corporation ........................................ 200% 2% endrin dust for melon insect investigation

DAVIS

California Cooperative Rice Research Foundation, Inc. ........................................ $771.00 For rice insect research program

California Planting Cotton Seed Distributors ........ $2,162.51 For melon insect investigation

National Rendezvous Association ....................... $2,000.00 For research on nutritional value of meat scrap and means of improving its quality

United States Golf Association, Green Section .... $250.00 For experiment on seed production of Anerion Bluegrass

LOS ANGELES

Gardeners Association of Pasadena Area ............... $10.00 For research in turfgrass culture

U. S. Golf Association, Green Section ................ $500.00 For studies on soil amendments

Yoder Brothers, Inc ........................................ 200 chrysanthemum curatives for golf course research

RIVERSIDE

Dr. and Mrs. J. W. Lesley .................................. Portable thermograph for research in agriculture

Various donors: Dr. and Mrs. J. W. Lesley ................ Collection of 3,000 reprints in the field of genetics and cytology—particularly of higher plants.

For studies in agriculture

STATEWIDE

American Chemical Paint Co ................................ 4 lb. Weedazol

1 gal. L. V. 64

1 gal. A.C.P. 903

For experimental work on control of weeds and brush on rangeland

Geigy Agricultural Chemicals ........................ 15 lbs. Manganese Sequestrene

10 lbs. Iron Sequestrene

10 lbs. Zinc Sequestrene

For spray on apricot trees to correct nutritional deficiencies