

ECONOMIC RETURN IN PRODUCTION OF LETTUCE AND CANTALOUPE IS AFFECTED BY CROPPING SYSTEM

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Field experiments were established at the University of California Desert Station in Coachella Valley from 1998 to 2000. The main plot treatments included summer cowpea used as mulch in the fall, summer cowpea incorporated into soil in the fall, summer sudangrass incorporated into the soil in the fall, and summer fallow (bare-ground). An economic comparison of cover crop treatments and crop management programs vs. the effect on yield, crop value, value of hand weeding, costs of production and net-return, and dollar investment from each treatment was determined. Among the cropping systems tested in 1999, lettuce following the incorporation of a cowpea cover crop produced the highest yield 1082.43 boxes/ha, with a net return of \$883.04/ha. The return for each dollar invested in the cowpea-incorporated system was an additional \$0.65 if cowpea incorporated was chosen over cowpea mulch. In 2000, the net-return from lettuce following cowpea incorporated was much higher with 1294.23 boxes/ha and a net-return of \$1698.46/ha. In 1999, cantaloupe grown in the cowpea-incorporated system had the highest net-return of \$973.34/ha with 874.58 boxes. An additional \$0.93 was made for choosing cowpea incorporated over sudangrass. In 2000, cantaloupe grown in the cowpea-incorporated system had even higher yields than in 1999, producing 1522.89 boxes/ha and returning over \$3000.00. And an additional \$0.93 was made for choosing cowpea incorporated over sudangrass cover crop. Overall, the rate of return on investment favored cowpea incorporated over all cover crops.