

ratio of the number of animal unit months of grazing on the Federal range to the number of animal units in the livestock inventory (X_2) increases one animal unit month, the average investment per animal unit decreases by \$28. Also, as the average number of cattle in the inventory (X_3) increases one animal unit, average investment per animal unit decreases by \$0.46 (\$46 per 100 head). These relationships indicate that as ranch size (X_3) approaches 512 animal units (the largest representative ranch in the study), investment per animal unit might be as little as \$350.43. On the average size ranch (217 animal units), if the average animal unit months in the grazing permit is as much as the observed maximum (11.2 animal unit months), total investment per animal unit might be as little as \$366.21.

LIVESTOCK PRODUCTION RATES

Differences in production rates such as calf crops, death losses, and average livestock weights, depend upon climatic and physical factors affecting forage production, as well as forage utilization practices, supplemental feeding programs, and times of marketing. Net production per animal unit of the representative ranches varies directly with ranch location and ranch size (table 6), and generally increases as the size of the ranch increases or as the ranch location becomes more favorable. The larger ranches and the Forest Service permit ranches have the highest production per animal unit.

PRODUCTION COSTS

Cash Costs

Supplemental feed, hired labor, fuel and oil, taxes, and grazing fees comprise about 70 percent of total cash costs (table 7). On an animal unit basis, average cash costs decrease with ranch size from \$42 on the smaller ranches to \$29 on the larger (table 8). Cash costs per pound of livestock sold also decrease with ranch size (table 9); they vary among representative ranches because of differences in winter feeding programs and the proportion of Federal range grazing and fees charged for this grazing.

Noncash Costs

The noncash costs consist of depreciation and death loss on purchased livestock, and an allowance for operator and family labor (table 7). Depreciation costs per animal unit generally decrease with ranch size, varying from an average of \$34 on the smallest ranches to \$12 on the largest (table 8). The comparable costs per pound of beef sold are 11.8 cents and 3.97 cents for small and large ranches (table 9). For comparable size ranches depreciation costs varied with duration of the grazing permit on Federal range and with the amount of crop and hayland owned. There was little variation in labor costs among ranches of similar sizes, except that more operator and family labor was required on ranches with base properties that included cropland and pasture.

Total operator and family labor costs vary directly with ranch size; however, these labor costs per animal unit decrease with ranch size. Labor costs per animal unit average \$47 for the smaller ranches and \$5 for the larger ranches (table 8).