

CONVERSION from NO Mineral Supplementation to Commercial Mineral Mix Supplementation, Hawaii County

JR Land and Livestock, a 200 cow/calf operation near Waimea, has not followed any regular or organized program for mineral supplementation of their cattle over the past 15 or so years.

Each year the ranch routinely observes symptoms of copper deficiency in its herds, especially during the winter and spring. Working with the University of Hawaii Cooperative Extension Service they learned that high amounts of iron found in their Kikuyu – Pangola grass forage can be expected to interfere with copper absorption in the rumen of the beef cattle. The operators are becoming convinced that the problem is costing them in terms of animal performance and want to investigate what the economic implications might be.

Recent work by the UH Cooperative Extension Service has found that mineral program using a commercial mineral mix could provide much of the mineral supplementation they need at around \$31.89/cow/year. Labor to distribute the mineral is expected to cost around \$20/hour, including all payroll taxes and benefits. They estimate that 3/4 of an hour per week or around 42 hours would be needed for the year.

Two new mineral bunks (1 bunk/100 head) would be needed at an estimated cost of \$500 each and are expected to last 10 years. Currently they are paying about 7 percent interest on their operating capital.

Other expenses for additional fuel, vehicle maintenance and miscellaneous costs are expected to increase about \$300/year. They also anticipate management costs will increase around \$250/year to manage the new mineral program.

After visiting extensively with one of the neighboring ranch families, JR L&L managers have learned that the benefits from supplementing the needed mineral should result in the ranch selling an additional 40 weaned calves at 6 months of age, weighing around 400 lbs./head. Prices are currently around \$135/cwt on these lighter calves. Furthermore, their annual veterinary costs (\$6,015) are expected to decrease by 10 percent (\$602) per year.

Another expected change is a cut in their culling rate. They expect to sell 17 fewer cull females each year, at a value of \$704/head. This is a reduction in revenue, but they would also save on transportation and marketing costs for these cull animals, usually costing the ranch around \$740/year.

Finally, after some additional thought, the managers realize that they should expect an increase in transportation and marketing cost associated with the added calves. They estimate this additional cost at \$536/year.

Managers of JR Land and Livestock wonder if the added calf sales and other benefits will outweigh the extra costs of the mineral supplementation program. They used the RightRisk RSP tool to determine if adopting a commercial mineral program would be worth it. In addition, due to potential fluctuations in mineral prices, the ranch wanted to consider how price variations in calf prices would affect the benefits of switching.

Based on past prices, they find that the commercial mineral mix prices have varied between \$29.46 and \$39.86/cow/year.

Lastly, after some market research, they feel that calf prices are likely to range between \$120 and \$165/cwt. over the next few years.

