

## **CONVERSION from Commercial Mineral Mix to Individual Free-Choice Mineral Supplementation, Maui County**

The X Bar Ranch, a 500 cow/calf operation near Keokea, has been supplementing their cattle with a commercial mineral mix for over the past 10 years.

However, each year they see symptoms of copper deficiency in their animals during the winter and spring. In working with the University of Hawaii Cooperative Extension Service they learned that high amounts of iron found in their upcountry Kikuyu – Pangola grass forage can interfere with copper absorption in the rumen of the beef cattle. Additionally, the ranch has heard about an alternative strategy for supplementing minerals utilizing individual mineral components offered cafeteria-style to the herd.

Current prices for commercial mineral mix runs about \$34.66/cow/year. Recent work by the UH Cooperative Extension Service has found that an individual, cafeteria-style mineral program may reduce the cost of supplementation to about \$16.69/cow/year.

Five new mineral bunks (1 bunk/100 head) would need to be constructed at an estimated cost of \$1,000 each and are expected to last 10 years. Currently they are paying about 7 percent interest on their operating capital.

With all this included, the ranch wonders if the reduced cost is worth the increase in labor and other associated expenses with handling the individual mineral components. They anticipate they will spend an average of about 1 additional hour per week putting out mineral following the free-choice approach. Labor cost is around \$20/hour, including all payroll taxes and benefits. Other expenses for additional fuel, vehicle maintenance and miscellaneous costs are expected to increase about \$250/year. They also anticipate management costs will increase around \$500/year to manage the new mineral program.

The X Bar used the RightRisk RSP tool to determine if switching to a cafeteria-style, individual, free-choice mineral program from a commercial mix would be worth it.

Furthermore, due to potential fluctuations in mineral prices, the ranch wanted to look at how price variations in commercial mix costs and costs of individual minerals would affect the benefits of switching.

Based on past prices, they find that the free-choice mineral mix could be expected range between \$14.19 and \$19.19/cow/year.

After further reflection, they realize that commercial mineral mix prices have varied between \$29.46 and \$39.86/cow/year.

