A Better Way to Wean

Larson, Abigail (School: Tioga High School)

This project was conducted to determine the effects of weaning methods on the weight gain, growth rate, feed intake, and feed efficiency of beef calves. Three different weaning methods were used: two-stage, fence-line, and abrupt weaning. Twenty-one calves were randomly selected and split into three groups, all containing three heifer calves and seven steer calves. Each group was weighed and measured prior to weaning and each week for a total of five weeks. Prior to separation, anti-sucking devices were inserted into the noses of the group weaned by the two-stage method. The devices remained in their noses for seven days. After the seven-day period, the devices were removed, and the calves were separated from their mothers. The group weaned by the fence-line method was separated from their mothers but housed in a pen adjacent to their mothers. The group weaned by the abrupt method was separated from their mothers and housed in a pen distant from their mothers. After separation, any uneaten hay and grain from each group was collected, weighed, and recorded daily to calculate average daily feed intake. Feed efficiency was measured each week by calculating the feed conversion ratio, or by dividing the average daily feed intake by the average daily weight gain of each group. Data recorded from this experiment presented that the two-stage weaning method is the most beneficial. This method resulted in the highest weight gain and the highest feed efficiency. The fence-line method resulted in a high weight gain, but also produced a high feed intake and low feed efficiency. The abrupt weaning method produced the lowest weight gain and feed intake. It was also determined the weaning methods did not have a significant effect on growth rate.