

The effect of artificial flavor supplements in non-efficient high producing dairy cows on production efficiency.

Previous studies have revealed that low efficiency (LE) cows differ from high efficiency (HE) cows by a higher dry matter intake (DMI) manifested by a higher eating rate, while milk yield, body weight, average daily gain and eating time remain similar.

We therefore hypothesized that HE cows, better adjust their intake to their energy needs while LE cows consume feed beyond their metabolic needs, and the excess energy is lost.

Based on a preliminary trial, showing a reduced eating rate when feed supplemented with natural extract of *Capsicum* spp. (Xtract Caps XL, Pancosma S.A., Switzerland), the objective of this study was to measure the effect of adding capsicum extract to both, LE and HE lactating cows on feed intake, milk yield, and efficiency of production.

Although there was a slight decrease in the DMI of LE cows during the first week of treatment with CAPs-XL, LE they did not differ from control LE cows in their yield and efficiency.

The calculated milk production efficiency of LE cows ($ECM/DMI = 1.44$) was lower than the HE cows ($ECM/DMI = 1.66$) cows, mainly because they had higher DMI (31.2 vs 27.8 kg/d, $P < 0.001$) while producing the same amount of ECM (45.6 vs 45.8 kg/d, respectively).

The results of this study do not support the method of reducing DMI to improve LE cows' efficiency and encourage further study of the causes for the variation in efficiency.