

# **Effects of feeding newly developed blend pellet products based on carinata meal or canola meal in combination with pulse screenings and lignosulfonate on lactational performance in high producing dairy cows**

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The objectives of this study were to examine the effect of feeding newly developed blend pelleted products based on carinata meal (BPPCR) or canola meal (BPPCN) in combination with pulse screenings and lignosulfonate on lactation performance and ruminal degradation kinetics in high producing dairy cows. In this study, nine mid lactating (3 cannulated + 6 non-cannulated ) Holstein cows (body weight: 679 ±124 kg; days on milk= 96± 22; average parities= 3) were randomly assigned to one of the following three dietary treatments: T1 = control diet (Con; common barley-based diet in western Canada); T2 = basal diet supplemented with 12%DM BPPCR (carinata meal 71.4 % + pea screenings 23.8% + lignosulfonate 4.8 %DM), and T3 = basal diet supplemented with 13%DM BPPCN (canola meal 71.4% + pea screenings 23.8 % + lignosulfonate 4.8%DM) in triplicate 3×3 Latin square design. Each experimental period lasted for 21 days with 14 days for adaptation and 7 days sampling. The results showed that there were no differences ( $P > 0.05$ ) between treatments in milk yield (averaging 47.4 kg/d) and fat corrected milk (averaging 46.3 kg/d). There was no effect ( $P > 0.05$ ) of dietary treatments on milk composition or milk component yield. The feed efficiency expressed as fat corrected milk / dry matter intake was not affected ( $P > 0.05$ ) by the treatments (averaging 1.8). There was no effect ( $P > 0.05$ ) of the blend pelleted products on the ruminal degradation kinetics of DM and CP.

Implications: the blend pelleted products based on carinata meal as a new co-product from bio-fuel processing industry is equal to the other pelleted products based on canola meal as a protein source for dairy cattle without affecting performance, rumen degradation kinetics of feed in high producing dairy cows.