

# The Effect of DairyPro on Milk Yield and Composition

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Dairy cows in early lactation require high energy rations to meet milk production energy needs. Extruded high lipid supplements may have a role in feeding programs for this type of cow. The temperature and pressure used in extrusion may improve protein and lipid rumen bypass characteristics. DairyPro is such a product and is composed of 65% whole soybeans, 5% canola seed, 10% flax seed, 10% pea grain and 10% alfalfa forage. DairyPro containing 34.8% crude protein and 19.6% lipid, and estimated NE<sub>L</sub> of 2.37 Mcal per kg was fed at 1.5 kg daily as a concentrate ingredient in the TMR of the high production group of the University of Saskatchewan dairy herd. The same forages were fed throughout the trial. DairyPro was fed for nine 20 day periods following an initial 30 day control period. Milk yield was recorded daily and milk components analyzed for two days at the end of each period. Group feed dry matter intake was recorded daily and cows weighed at the end of each period. Milk yield (3.5% FCM) increased ( $P < 0.05$ ) by 13.7% to 42.4 kg in the first DairyPro feeding period and maintained similar production for the remainder of the feeding trial as the cows were regrouped to maintain an average of 100 days in milk. Milk fat percentage was 3.36% in the control period and not different at 3.35% in the DairyPro periods. Protein percentage was reduced from 3.21% in the control period to 3.06% in the DairyPro feeding periods ( $P < 0.05$ ). In the final period milk samples were analyzed for fatty acids. Total conjugated linoleic acid (CLA) averaged 0.99% of fatty acids. Omega-3 fatty acids included alpha-linolenic 0.75%, Eicosapentaenoic (EPA) 0.06%, Docosapentaenoic (DPA) 0.12% and Docosahexaenoic (DHA) 0.10% of fatty acids. Throughout the trial milk yields were increased by 1 to 3 kg of FCM, dry matter and energy intakes were slightly increased and body weights maintained or slightly increased.