

THE EFFECT OF CASSAVA POMACE AND PROTECTED SOYBEAN MEAL ON DAIRY MILK PRODUCTION AND QUALITY

ABSTRACT

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18/437397/PPT/01032

This study aims to determine the effect of cassava pomace and protected soybean meal on dairy milk production and quality of mid lactated dairy cows. This research was conducted at smallholder in Turen, Malang from January to April 2020. Twelve lactating Friesian Holstein dairy cows were divided into 2 groups so that each group consisted of 6, namely the control and treatment group. The feed is forage and concentrate with a ratio of 35:65 in dry matter. The control group got concentrate with DM content of 30.58%. CP 14.87% and TDN 75.06%, while the treatment group got concentrate with supplementation of waste cassava 15% of DM ratio and protected soybean meal 45 g/l milk production. The variables observed were nutrient consumption, milk production and quality. Data between the two groups were analyzed using the Independent Sample T-test. The results showed that the addition of waste cassava and protected soybean meal increased ($P < 0.05$) nutrient consumption (DM, OM, CP, CF, EE, and TDN). Milk production between the treatment group was higher ($P < 0.05$) than control group (9.46 ± 1.30 vs. 6.07 ± 1.26) liters/head/day. Milk protein production between the treatment group was higher ($P < 0.05$) than control group (0.37 ± 0.07 vs. 0.21 ± 0.07) liters/head/day. Milk fat production between the treatment group was higher ($P < 0.05$) than control group (0.50 ± 0.90 vs. 0.30 ± 0.07) liters/head/day. The composition of glucose and blood urea in control and treatment dairy cows were not significant. It was concluded that giving cassava pomace and protected soybean meal to dairy cows during mid lactation increased nutrient consumption, milk production, milk protein production, and milk fat production but did not increase percentage of protein and milk fat also did not affect on blood glucose content and blood urea nitrogen.

Key words: dairy cow productivity, Friesian Holstein, mid lactation, protected soybean meal, cassava pomace