

## **Perbaikan Manajemen Pakan terhadap Penampilan Klinis, Produksi dan Kualitas Susu Sapi Perah Pasca Infeksi Penyakit Mulut dan Kuku**

### **INTISARI**

Penyakit Mulut dan Kuku (PMK) menginfeksi semua hewan berkuku belah termasuk sapi perah, yang dapat mengakibatkan penurunan produksi susu secara drastis. Sapi yang diserang PMK dapat disembuhkan, namun produksi susu kemungkinan tidak dapat kembali normal. Perbaikan nutrisi kemungkinan akan dapat mempercepat pemulihan. Penelitian ini bertujuan untuk mengkaji produksi susu sapi yang pernah terinfeksi PMK yang diberi pakan penguat. Sebanyak 15 ekor sapi laktasi yang pernah terinfeksi PMK, pakan basal, konsentrat dan premiks digunakan di dalam penelitian ini. Sapi dikelompokkan menjadi 3 kelompok, terdiri dari kelompok I (diberi rumput Raja, konsentrat Karfeed), kelompok II (sapi diberi rumput Raja, konsentrat Karfeed ditambah premix), dan kelompok III (sapi diberi rumput Raja, konsentrat Protelis®). Pakan Basal berupa rumput Raja diberikan sebanyak 10% bobot badan dan konsentrat 2% bobot badan selama 55 hari. Semua sapi diperiksa fisik secara keseluruhan sebelum perlakuan, dilanjutkan pemeriksaan swab *oral*, sampel susu dan darah pada hari ke 30 dan 55. Sampel darah diperiksa gambaran darah rutin dan sampel susu diperiksa terhadap kualitas susu. Hasil pemeriksaan fisik sapi, gambaran darah dan kualitas susu antar kelompok dianalisis secara deskriptif, sedangkan jumlah produksi susu antar kelompok dibandingkan menggunakan ANOVA. Hasil penelitian menunjukkan bahwa seluruh sapi telah didiagnosis sehat setelah menderita PMK berdasarkan gejala klinis, antibodi terhadap PMK, dan virus PMK yang diperiksa dengan *Polymerase Chain Reaction* (PCR). Hasil ini menunjukkan perbedaan yang signifikan ( $p < 0,05$ ) pada produksi susu yang diberikan pakan basal dengan suplementasi konsentrat Protelis®, meskipun kualitas susu menunjukkan perbedaan yang tidak signifikan ( $p > 0,05$ ). Disimpulkan bahwa, komposisi pakan Kelompok III yang menggunakan konsentrat Protelis® mampu meningkatkan produksi susu sebesar 28,3% dan meningkatkan kualitas protein, lemak, laktosa, bahan kering tanpa lemak dan total solid.

Kata kunci: Penyakit Mulut dan Kuku, produksi susu, kualitas susu, sapi perah

## **Improving Feed Management on Clinical Appearance and Increasing Milk Production in Dairy Cattle After Foot and Mouth Disease Infection**

### **ABSTRACT**

Foot and Mouth Disease (FMD) is a highly contagious viral infection affecting various cloven-hoofed animals, including dairy cattle. This disease has the potential to reduce milk output in affected animals significantly. Cows infected with FMD have the potential to be treated, although it is uncertain if their milk output will fully recover to pre-illness levels. This research aimed to investigate the impact of various feed combinations on milk production and quality in dairy cows previously infected with FMD. This research used 15 dairy cows that had been diagnosed with FMD. The cows received basal feed, concentrate, and premix as part of the experimental procedure. The cows were subsequently divided into three groups of feed treatment, each consisting of five cows. Group I—cows were fed a combination of basal feed (King grass) and Karfeed concentrate, Group II—cows had a variety of basal feed, Karfeed concentrate, and premix, and Group III—cows got a combination of basal feed and Protelis® concentrate. Every cow was provided with a daily ration consisting of 10% of its body weight in King grass and 2% of its body weight in concentrate for a period of 55 days. A comprehensive physical examination was conducted on all cows, followed by assessing oral swabs and collecting milk and blood samples. Routine blood testing involves the examination of blood samples, while the analysis of milk samples assesses milk quality. Descriptive analysis was conducted to examine the outcomes of the physical examination, blood analysis, and milk quality across different groups of cows. In contrast, a comparison of milk output between groups was conducted using analysis of variance (ANOVA). The research showed that all cows were diagnosed as healthy after suffering from FMD based on clinical symptoms, antibodies to FMD, and the FMD virus examined by Polymerase Chain Reaction (PCR). This result presents a significant difference ( $p < 0.05$ ) in milk production, which combines basal feed with Protelis® concentrate supplementation. However, the milk quality presents insignificant differences ( $p > 0.05$ ). In summary, the composition between basal feed and Protelis® concentrate increased milk production by 28.3% and improved the quality of milk protein, milk fat, lactose, solid non-fat, and total solid.

**Keywords:** foot and mouth disease, milk production, milk quality, dairy cows