

## RINGKASAN

**NUR IKHSANUDIN.** Penelitian ini berjudul Kadar Serat Kasar dan Protein Kasar Bahan Pakan Limbah Agroindustri yang Difermentasi Menggunakan Isolat Bakteri Selulolitik Asal Ulat Albasia. Penelitian ini bertujuan untuk mengevaluasi kandungan serat kasar dan protein kasar bahan pakan asal limbah agroindustri yang difermentasi dengan bakteri selulolitik yang diisolasi dari ulat albasia. Penelitian dilaksanakan mulai 22 Oktober 2016 sampai 12 November 2016 di Laboratorium Ilmu Nutrisi dan Makanan Ternak Fakultas Peternakan Universitas Jenderal Soedirman, Purwokerto.

Materi yang digunakan dalam penelitian meliputi 400 gram kulit kacang tanah, 400 gram kulit kacang kedelai, 400 gram tongkol jagung, isolat bakteri selulolitik asal ulat albasia. Perlakuan yang diberikan yaitu  $R_1$  = 50 gram Kulit kacang tanah tanpa fermentasi,  $R_2$  = 50 gram Kulit kedelai tanpa fermentasi,  $R_3$  = 50 gram Tongkol jagung tanpa fermentasi,  $R_4$  = 50 gram Kulit kacang tanah + 10% fermentasi dengan bakteri selulolitik,  $R_5$  = 50 gram Kulit kedelai + 10% fermentasi dengan bakteri selulolitik,  $R_6$  = 50 gram Tongkol jagung + 10% fermentasi dengan bakteri selulolitik.

Data dianalisis dengan menggunakan Uji Independent Sample T Test. Hasil Penelitian menunjukkan bahwa penambahan 10% isolat bakteri selulolitik asal ulat albasia berpengaruh sangat nyata ( $P < 0,01$ ) terhadap penurunan kadar serat kasar dan berpengaruh sangat nyata ( $P < 0,01$ ) terhadap penurunan kadar protein kasar. Dapat disimpulkan bahwa Isolat bakteri selulolitik asal ulat albasia dapat digunakan untuk fermentasi berbagai macam limbah agroindustri.

Kata kunci : bakteri selulolitik, ulat albasia, serat Kasar, protein Kasar

## SUMMARY

**NUR IKHSANUDIN.** This study, entitled “Levels Crude Fiber and Crude Protein Feed Materials Agroindustrial Waste fermented Using cellulolytic bacteria Isolates from caterpillar albasia. This study aimed to evaluate the content of crude fiber and crude protein feed ingredient origin agro-industry waste is fermented with cellulolytic bacteria isolated from caterpillar albasia. The research was conducted from October 22, 2016 until 12 November 2016 at the Laboratory of Nutrition and Food Sciences Faculty of Animal Husbandry General Sudirman University, Purwokerto.

The material used in the study includes 400 grams of peanut shell, 400 grams of soy beans shell, 400 grams of corn cobs, bacterial isolates albasia caterpillar of cellulolytic origin. The treatment given is R1 = 50 grams of peanuts skin without fermentation, R2 = 50 grams of soybeans skin without fermentation, R3 = 50 grams of cobs of corn without fermentation, R4 = 50 grams of peanuts skin + 10% fermentation with cellulolytic bacteria, R5 = 50 grams of soybean skin + 10% fermentation with cellulolytic bacteria, R6 = 50 grams corn cobs + 10% fermentation with cellulolytic bacteria.

Data were analyzed using Independent Sample T Test. Results showed that the addition of 10% of bacterial isolates caterpillar of cellulolytic origin albasia highly significant ( $P < 0.01$ ) towards a decrease in crude fiber content and highly significant ( $P < 0.01$ ) towards decreased levels of crude protein. It can be concluded that the origin of the caterpillar of cellulolytic Bacterial isolates albasia can be used to ferment a wide range of agro-industrial waste.

Keywords : cellulolytic bacteria, caterpillar albasia, crude ciber, crude protein