KUALITAS KIMIA DAN FISIK SILASE TANAMAN JAGUNG (*Zea mays*) PADA BERBAGAI UMUR PANEN

NUROMAT
NIM. 17021165

INTISARI*

Penelitian ini bertujuan untuk mengetahui kualitas kimia dan fisik silase tanaman jagung pada berbagai umur panen. Penelitian ini dilaksanakan pada tanggal 10 Maret sampai dengan 2 Juni 2021. Penanaman dan pembuatan silase tanaman jagung dilakukan di Dusun Belater, Desa Sempol, Kecamatan Sukoharjo, Kabupaten Wonosobo, Jawa Tengah. Analisis nutrien dilakukan di Laboratorium Produksi Ternak, Fakultas Agroindustri, Universitas Mercu Buana Yogyakarta. Penelitian ini menggunakan Rancangan Acak Lengkap (RAL) pola searah yang terdiri dari tiga (3) perlakuan dan tiga (3) ulangan. Perlakuan penelitian ini menggunakan tanaman jagung umur panen 55 hari (P1), 70 hari (P2) dan 85 hari (P3). Variabel yang diamati adalah kualitas kimia (bahan kering, protein kasar dan serat kasar) dan kualitas fisik (pH, aroma, keberadaan jamur, tekstur dan warna). Data dianalisis menggunakan *Analysis of Variance* (ANOVA), jika terdapat perbedaan yang nyata dilanjutkan dengan uji *Duncan's New Multiple Range Test* (DRMT). Hasil penelitian menunjukkan rerata kualitas kimia dan fisik silase tanaman jagung P1, P2 dan P3 berturut-turut adalah bahan kering 17,32, 19,99 dan 22,05 %; protein kasar 16,09, 13,33 dan 11,67 %; serat kasar 38,85, 37,87 dan 34,57 %; nilai pH 3,23, 3,70 dan 3,56; aroma 4,40, 4,47 dan 4,53; keberadaan jamur 4,67, 5,00 dan 5,00; tekstur 4,77, 4,80 dan 4,70 dan warna 4,73, 4,83 dan 4,83. Hasil analisis variansi pada kualitas kimia menunjukkan perbedaan yang nyata ($P<0,05$) pada bahan kering, protein kasar dan serat kasar. Hasil analisis variansi pada kualitas fisik menunjukkan perbedaan yang nyata ($P<0,05$) pada nilai pH tetapi berbeda tidak nyata ($P>0,05$) pada nilai aroma, keberadaan jamur, tekstur dan warna. Berdasarkan hasil penelitian disimpulkan bahwa umur panen yang tepat untuk menghasilkan kualitas kimia dan fisik silase tanaman jagung terbaik pada umur panen 85 hari.

Kata Kunci : Silase Tanaman Jagung, Kualitas kimia dan fisik, Umur Panen.

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*Intisari Seminar Sarjana Peternakan, Progam Studi Peternakan, Fakultas Agroindustri, Universitas Mercu Buana Yogyakarta, 2022.

CHEMICAL AND PHYSICAL QUALITY OF CORN (*Zea mays*) SILAGE AT VARIOUS OF HARVESTING AGE

NUROMAT
NIM. 17021165

ABSTRACT *)

This study aims to determine the chemical and physical quality of corn silage at various of harvest ages. This research was conducted from March 10 to June 2, 2021. Planting and making corn silage was carried out in Belater Hamlet, Sempol Village, Sukoharjo District, Wonosobo Regency, Central Java. Nutrient analysis was carried out at the Livestock Production Laboratory, Faculty of Agroindustry, Mercu Buana University, Yogyakarta. This study used a completely randomized design (CRD) with one way pattern consisting of three (3) treatments and three (3) replications. The treatment of this research used maize harvested age of 55 days (P1), 70 days (P2) and 85 days (P3). The variables observed were chemical quality (dry matter, crude protein and crude fiber) and physical quality (pH, aroma, presence of mushrooms, texture and color). Data were analyzed using Analysis of Variance (ANOVA), if there was a significant difference, it was continued with Duncan's New Multiple Range Test (DRMT). The results showed that the average chemical and physical quality of corn silage P1, P2 and P3 respectively were dry matter 17.32, 19.99 and 22.05%; crude protein 16.09, 13.33 and 11.67%; crude fiber 38.85, 37.87 and 34.57 %; pH values 3.23, 3.70 and 3.56; aroma 4.40, 4.47 and 4.53; the presence of mushrooms 4.67, 5.00 and 5.00; textures 4.77, 4.80 and 4.70 and colors 4.73, 4.83 and 4.83. The results of the analysis of variance on chemical quality showed significant differences ($P<0.05$) in dry matter, crude protein and crude fiber. The results of the analysis of variance on physical quality showed a significant difference ($P<0.05$) in the pH value but not significantly different ($P>0.05$) in the value of aroma, presence of mushrooms, texture and color. Based on the results of the study, it was concluded that the right harvest age to produce the best chemical and physical quality of corn silage was at harvest age of 85 days.

Keywords: Corn Silage, Chemical and Physical Quality, Harvest Age.

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