

PERTUMBUHAN, KANDUNGAN NUTRIEN, DAN PRODUKSI SORGUM VARIETAS SUPER-2 DAN *BROWN MIDRIB RESISTANCE* PADA PEMOTONGAN PERTAMA *INTERCROPPING* DENGAN *STYLOSANTHES*

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INTISARI

Penelitian ini dilakukan untuk mengetahui pertumbuhan, kandungan nutrien, dan produksi pada pemotongan pertama sorgum varietas super-2 dan *brown midrib resistance* (BMR) yang ditanam *intercropping* dengan *Stylosanthes guianensis*. Penelitian ini dilaksanakan di Kebun Laboratorium Hijauan Makanan Ternak dan Pastura Fakultas Peternakan UGM. Penelitian menggunakan Rancangan Acak Lengkap (RAL) pola searah dengan 2 variabel yaitu sorgum varietas super-2 dan varietas BMR ditanam pada petak ukuran 2 x 3 m dengan 6 ulangan. Tanaman sorgum ditanam *intercropping* dengan *stylosanthes* dengan jarak tanam 75 x 25 cm dan *Stylosanthes guianensis* ditanam dengan jarak tanam 25 x 25 cm diantara tanaman sorgum. Data penelitian dianalisis dengan analisis variansi. Hasil penelitian menunjukkan bahwa pertumbuhan sorgum varietas super-2 lebih tinggi ($P < 0,05$) dibanding BMR yaitu tinggi tanaman (276,50 vs 256,96 cm), panjang tanaman (296,72 vs 280,51 cm), lebar daun (9,83 vs 6,61 cm), diameter batang (29,39 vs 20,92 cm). Kandungan nutrien hasil proksimat sorgum varietas BMR lebih tinggi dibanding super-2 yaitu BK (13,60 vs 10,65%), BO (87,21 vs 84,59%), dan LK (1,90 vs 1,31%), sedangkan kandungan TDN sorgum varietas super-2 lebih tinggi dibanding BMR yaitu (57,46 vs 53,35%). Kandungan fraksi serat sorgum varietas super-2 lebih tinggi ($P < 0,05$) dibanding BMR yaitu NDF (68,83 vs 63,51%), ADF (50,35 vs 45,53%), selulosa (40,94 vs 37,72%) dan lignin (9,41 vs 7,81%). Kandungan serat kasar, protein kasar, BETN, hemiselulosa, produksi bahan kering, produksi bahan organik, dan produksi protein kasar kedua varietas berbeda tidak nyata berturut-turut adalah 36,10%, 8,35%, 38,83%, 18,49%, 5,67, 4,79, dan 0,47 ton/ha pada varietas super-2 dan 35,25%, 8,54%, 41,52%, 17,98%, 6,67, 5,82, dan 0,57 ton/ha pada varietas BMR. Dari penelitian ini dapat disimpulkan bahwa sorgum varietas BMR memiliki pertumbuhan dan kandungan fraksi serat lebih rendah tetapi produksinya sebanding dengan varietas super-2.

Kata kunci: Sorgum varietas BMR dan Super-2, Pemotongan pertama, Pertumbuhan, Produksi, dan Kandungan nutrien

GROWTH, NUTRIENT CONTENT, AND PRODUCTION OF VARIETIES SUPER-2 AND BROWN MIDRIB RESISTANCE SORGHUM AT FIRST HARVESTING INTERCROPPING WITH STYLOSANTHES

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ABSTRACT

The objective of this study was to explore the growth, nutrient content, and production of super-2 and BMR sorghum on the first harvesting time in intercropping with *Stylosanthes guianensis*. This study located in Forage and Pasture Science Laboratory Animal Science and Industry UGM. The design of this study was Completely Randomized Design (CRD) one way pattern with 2 variables, there were super-2 sorghum variety and BMR variety planted on 2 x 3 m plot size with 6 replications. Sorghum were planted with spacing 75 x 25 cm and *Stylosanthes guianensis* were planted between sorghum plant with spacing 25 x 25 cm. The data were analyzed with analysis of variance. The result showed that super-2 sorghum growth was higher ($P < 0,05$) than BMR on plant height (276,50 vs 256,96 cm), plant length (296.72 vs 280.51 cm), leaf width (9.83 vs 6.61 cm), and stem diameter (29.39 vs 20.92 cm). Nutrient contents from proximate analysis showed BMR sorghum was higher ($P < 0,05$) than super-2 on DM (13.60 vs 10.65%), OM (87.21 vs 84.59%), and EE (1.90 vs 1.31%), otherwise TDN content of super-2 variety was higher than BMR (57.46 vs 53.35%). Fiber fractions of super-2 variety were higher ($P < 0.05$) than BMR on NDF (68.83 vs 63.51%), ADF (50.35 vs 45.53%), cellulose (40.94 vs 37.72%), and lignin (9.41 vs 7.81%). Crude fiber, crude protein, NFE, TDN, and hemicellulose contents, dry matter production, organic matter production, and crude protein production were not significantly different 36.10%, 8.35%, 38.83%, 18.49%, 5.67, 4.79, dan 0.47 and 0.48 ton/ha in super-2 varieties and 35.25%, 8.54%, 41.52%, 17.98%, 6.67, 5.82, dan 0.57 ton/ha in BMR varieties respectively. Based on the result it can be concluded that BMR sorghum had lower growth and fiber fraction content, but the production were not different between two varieties sorghum.

Keywords: BMR and Super-2 Sorghum, First harvesting, Growth, Nutrient content, and Production.