

PHENOTYPIC CHARACTERISTIC OF DIFFERENT SHEEP BREEDS AT ALIYAH RIZQ FARM JOHOR, MALAYSIA

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BOGOR
2026**



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ABSTRACT

MUHAMMAD HAKAM. Phenotypic Characteristics of Different Sheep Breeds at Aliyah Rizq Farm Johor, Malaysia. Supervised by ASEP GUNAWAN and MUHAMMAD JASIM UDDIN.

Phenotypic characterization of exotic sheep breeds and their crossbred offspring is essential for supporting selection and breeding programs in tropical farm settings. This study aimed to identify the phenotypic characteristics including ear shape, horn presence, tail shape, color pattern, and color type of five exotic sheep breeds (Whitehead Dorper, Blackhead Dorper, Merino, Santa Ines, and Barbados Blackbelly) and their crossbred offspring produced from Malin dams at Aliyah Rizq Farm (ARF), Malaysia. A total of 221 sheep, consisting of 14 full-blood rams and 207 crossbred offspring (108 male, 99 female) were observed through direct visual observation. Phenotypic characteristic traits were analyzed descriptively using relative frequency. Results showed that all rams were polled and exhibited plain color patterns with breed-specific color types. Among offspring, horn presence was sex-influenced, with 37.96% of males horned and all females polled. Thin tail was predominant in male offspring (100%), while female offspring showed greater variation. Color type was more diverse in offspring than in rams, with Blackhead Dorper and Whitehead Dorper crosses showing stronger ram color expression. These findings provide a phenotypic database that can support selection and breeding management decisions at ARF.

Keywords: crossbred offspring, phenotypic, qualitative traits, sheep breeds



ABSTRAK

MUHAMMAD HAKAM. Karakteristik Fenotipik Domba Berbagai Breed di Aliyah Rizq Farm Johor, Malaysia. Dibimbing oleh ASEP GUNAWAN dan MUHAMMAD JASIM UDDIN.

Karakterisasi fenotipik domba eksotik dan hasil persilangan diperlukan untuk mendukung program seleksi dan pemuliabiakan di peternakan tropis. Penelitian ini bertujuan untuk mendeskripsikan karakteristik fenotipik kualitatif meliputi bentuk telinga, keberadaan tanduk, bentuk ekor, pola warna, dan tipe warna dari lima breed domba eksotik (Whitehead Dorper, Blackhead Dorper, Merino, Santa Ines, dan Barbados Blackbelly) serta anak silangnya dengan domba Malin di Aliyah Rizq Farm (ARF), Johor Bahru, Malaysia. Sebanyak 221 ekor domba, terdiri atas 14 pejantan murni (rams) dan 207 anak silang (108 jantan, 99 betina), diamati melalui pengamatan visual langsung. Data dianalisis secara deskriptif menggunakan frekuensi relatif. Hasil menunjukkan seluruh pejantan tidak bertanduk dan memiliki pola warna polos dengan tipe warna spesifik sesuai breed. Pada hasil persilangan, keberadaan tanduk dipengaruhi jenis kelamin, dengan 37,96% jantan bertanduk dan seluruh betina tidak bertanduk. Ekor tipis dominan pada anak jantan (100%), sedangkan anak betina menunjukkan variasi lebih besar. Tipe warna lebih beragam pada anak silang dibandingkan pejantan, dengan silangan Blackhead Dorper dan Whitehead Dorper menunjukkan ekspresi warna pejantan yang lebih kuat. Hasil penelitian ini memberikan basis data fenotipik yang dapat mendukung keputusan manajemen seleksi dan pemuliabiakan di ARF.

Kata kunci: fenotipik, hasil persilang, ras domba, sifat kualitatif



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PREFACE

Praise and gratitude author extends to Allah Subhanahu wa Ta'ala for all His blessings, through which this scientific work was successfully completed. The theme chosen for this research is the "Phenotypic Characteristics of Different Sheep Breeds at Aliyah Rizq Farm Johor Bahru, Malaysia", conducted from January 2026 to April 2026.

The author would like to thank Prof. Dr. agr. Asep Gunawan, S.Pt., M.Sc. and Dr. Muhammad Jasim Uddin, DVM, as supervisors who have provided guidance and much advice during the research and writing of this thesis. Thanks are also extended to the seminar moderator and the examiner outside the supervisory committee. In addition, the author expresses appreciation to Aliyah Rizq Farm Johor Bahru, Malaysia, for granting permission and facilitating the data collection in the field. The author also conveys gratitude to parents and the entire family who have provided support, prayers, and affection.

May this thesis be beneficial to those who need it and contribute to the advancement of knowledge in the field of livestock production technology.

Bogor, June 2026

Muhammad Hakam



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