

ABSTRAK

PENGARUH SUPLEMENTASI TEPUNG CANGKANG KERANG DARAH (*Anadara granosa*) TERHADAP KUALITAS VOKALISASI BURUNG KENARI (*Serinus canaria*) DI MINI ZOO EXOTARIUM YOGYAKARTA

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Burung kenari (*Serinus canaria*) merupakan salah satu burung berkicau yang banyak diminati di Indonesia, terutama dalam kegiatan kontes kicau. Kualitas vokalisasi kenari sangat dipengaruhi oleh kadar testosteron, namun pemberian testosteron sintetik berisiko menimbulkan efek samping seperti atrofi testis dan disfungsi reproduksi. Oleh karena itu, diperlukan alternatif alami melalui pemanfaatan tepung cangkang kerang darah (*Anadara granosa*) yang mengandung zinc dan berpotensi sebagai *natural aromatase blocker*. Penelitian ini bertujuan mengkaji pengaruh suplementasi tepung cangkang kerang darah terhadap frekuensi *call* dan *song* burung kenari jantan sebagai indikator aktivitas vokalisasi. Penelitian menggunakan tiga ekor burung kenari jantan dewasa, dua ekor mendapat suplementasi dan satu ekor sebagai kontrol yang hanya mendapat pakan standar. Pengamatan dilakukan selama tujuh minggu dengan perekaman suara setiap minggu selama satu jam per sesi, menghasilkan enam segmen rekaman dengan interval 10 menit. Dari setiap sesi dipilih segmen lima menit berkualitas terbaik untuk dianalisis menggunakan Audacity. Vokalisasi diklasifikasikan menjadi *call* dan *song*, kemudian dianalisis menggunakan uji normalitas *Shapiro-Wilk* dilanjutkan uji non-parametrik *Mann-Whitney* karena data tidak berdistribusi normal. Hasil penelitian menunjukkan suplementasi tepung cangkang kerang darah berpengaruh signifikan terhadap frekuensi *call* maupun *song* ($p < 0,05$). Kelompok perlakuan menunjukkan peningkatan frekuensi *song* sebesar 97,2% dibandingkan kontrol, mengindikasikan bahwa zinc menghambat enzim aromatase sehingga konversi testosteron menjadi estradiol dapat ditekan dan kadar testosteron bebas meningkat. Sebaliknya, frekuensi *call* kelompok perlakuan lebih rendah dibandingkan kontrol, menunjukkan pergeseran prioritas vokalisasi dari *call* menuju *song* yang lebih kompleks dan responsif terhadap perubahan hormonal. Dengan demikian, tepung cangkang kerang darah berpotensi dimanfaatkan sebagai suplemen alami untuk meningkatkan kualitas vokalisasi *song* burung kenari.

Kata Kunci: burung kenari (*Serinus canaria*), *call*, *song*, tepung cangkang kerang darah, vokalisasi

ABSTRACT

Effect of Blood Cockle Shell Powder (*Anadara granosa*) Supplementation on the Vocalization Quality of Canary Birds (*Serinus canaria*) at Mini Zoo Exotarium Yogyakarta

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The canary (*Serinus canaria*) is one of the most popular songbirds in Indonesia, particularly in singing competitions. The quality of canary vocalization is strongly influenced by testosterone levels; however, the administration of synthetic testosterone may cause adverse effects such as testicular atrophy and reproductive dysfunction. Therefore, a natural alternative is needed through the utilization of blood cockle shell (*Anadara granosa*) powder, which contains zinc and has the potential to act as a natural aromatase blocker. This study aimed to evaluate the effect of blood cockle shell powder supplementation on the call and song frequencies of male canaries as indicators of vocal activity. The study involved three adult male canaries, with two birds receiving blood cockle shell powder supplementation and one bird serving as a control receiving only a standard diet. Observations were conducted over seven weeks, with weekly sound recordings performed for one hour per session, resulting in six recording segments at 10-minute intervals. From each session, the highest-quality five-minute segment was selected for analysis using Audacity. Vocalizations were classified into call and song categories and analyzed using the *Shapiro–Wilk* normality test, followed by the non-parametric *Mann–Whitney* test because the data were not normally distributed. The results showed that blood cockle shell powder supplementation significantly affected both call and song frequencies ($p < 0.05$). The treatment group exhibited a 97.2% increase in song frequency compared with the control group, indicating that zinc inhibits the aromatase enzyme, thereby reducing the conversion of testosterone into estradiol and increasing free testosterone levels. In contrast, the call frequency of the treatment group was lower than that of the control group, suggesting a shift in vocalization priority from calls to the more complex songs, which are more responsive to hormonal changes. Therefore, blood cockle shell powder has the potential to be used as a natural supplement to improve the song vocalization quality of canaries.

Keywords: blood clam shell powder, call, canary (*Serinus canaria*), song, vocalization