

KADAR BESI (Fe) DAN PARAMETER PROFIL SERUM DARAH KAMBING PERAH PADA PARTURISI YANG BERBEDA

INTISARI

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Kemampuan laktasi kambing perah secara berkelanjutan dipengaruhi oleh kemampuan reproduksi dalam menghasilkan anakan. Penelitian ini bertujuan untuk mengetahui perbedaan kadar besi dan parameter profil serum darah antar kelompok parturisi sehingga efisiensi reproduksi induk diketahui. Sebanyak 41 ekor induk kambing perah (BCS 3) dibagi menjadi 3 kelompok berdasar jumlah parturisi yaitu parturisi 1 sebanyak 15 ekor, parturisi 2 sebanyak 16 ekor dan parturisi ≥ 3 sebanyak 10 ekor. Induk dipelihara di Turi, Sleman dengan manajemen pemeliharaan yang sama. Darah kambing perah diambil mewakili fase reproduksi, serum digunakan untuk analisis. Kandungan kadar besi serum diketahui melalui metode AAS. Uji kadar komponen profil serum darah berupa uji glukosa melalui metode GOD-PAP, uji kolesterol total melalui metode CHOD-PAP, uji albumin melalui metode *bromocresol blue*, uji *blood urea nitrogen* (BUN) melalui metode *urease-GLDH*, uji kreatinin melalui metode *Jaffe* dan uji protein total melalui metode Biored. Data dianalisis dengan *one-way Anova* dilanjutkan dengan uji *Duncan multiple range test*. Hasil analisis terhadap kadar besi, glukosa, kolesterol total, BUN dan albumin serum menunjukkan penurunan secara signifikan ($P < 0,05$) seiring peningkatan jumlah parturisi induk. Kadar besi serum induk parturisi 1, 2 dan ≥ 3 secara berurutan adalah $9,31 \pm 10,29$; $5,33 \pm 4,91$; dan $5,12 \pm 4,43$ mg/kg. Kadar glukosa serum induk parturisi 1, 2 dan ≥ 3 secara berurutan adalah $60,84 \pm 6,42$; $61,92 \pm 7,09$; dan $57,74 \pm 7,30$ mg/dL. Kadar kolesterol total serum induk secara berurutan yaitu $124,55 \pm 32,28$; $115,57 \pm 24,47$; dan $92,96 \pm 16,97$ mg/dL. Kadar albumin serum induk secara berurutan adalah $3,97 \pm 0,2$; $3,83 \pm 0,18$; dan $3,79 \pm 0,13$ g/dL. Kadar BUN serum induk secara berurutan yaitu $20,30 \pm 5,87$; $20,16 \pm 4,71$; dan $16,62 \pm 5,63$ mg/dL. Hasil analisis terhadap kadar kreatinin dan protein total serum tidak berbeda signifikan ($P > 0,05$). Kadar kreatinin serum induk secara berurutan yaitu $0,79 \pm 0,2$; $0,84 \pm 0,19$; dan $0,87 \pm 0,25$ mg/dL. Kadar protein total serum induk secara berurutan yaitu $6,53 \pm 1,98$; $7,05 \pm 1,98$; dan $6,77 \pm 1,89$ g/dL. Disimpulkan bahwa induk parturisi 1, 2 dan ≥ 3 masih layak dipertahankan untuk dipelihara dalam usaha *breeding* dan pemerahan susu.

Kata kunci: Profil serum darah, zat besi, parturisi, kambing perah

IRON (Fe) LEVEL AND PARAMETERS OF BLOOD SERUM PROFILE IN LACTATING GOATS ON DIFFERENT PARTURITIONS NUMBER

ABSTRACT

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The ability to have continuous lactation were influenced by reproduction ability in producing kids. This research was conducted to observe iron level and parameters of blood serum profile between parturition groups to understand doe's reproduction efficiency. Forty-one lactating goats (BCS 3) were divided into three groups based on parturition amount which is 15 does on parturition 1, 16 does on parturition 2 and 10 does on parturition ≥ 3 . Does were kept in Turi, Sleman with same management style. Each lactating goat's blood was taken to represent reproduction phase which later the serum was analyzed. Iron level was analyzed by AAS method. Blood serum profile such as glucose level was analyzed by GOD-PAP method, cholesterol level was analyzed by CHOD-PAP method, blood urea nitrogen (BUN) level was analyzed by urease-GLDH method, albumin level was analyzed by bromcresol-blue method, creatinine level was analyzed by Jaffe method and total protein level was analyzed by Biored method. Obtained data were analyzed using one-way Anova continued with Duncan multiple range test. Obtained data were analyzed using one-way Anova continued with Duncan multiple range test. Iron level, albumin, cholesterol, BUN and glucose level in lactating goat's serum showed significant difference ($P < 0.05$) between parturition group and decrease following the increase of parturition number. Iron level on parturition 1, 2 and ≥ 3 respectively were $9,31 \pm 10,29$; $5,33 \pm 4,91$; and $5,12 \pm 4,43$ mg/kg. Glucose serum level respectively were $60,84 \pm 6,42$; $61,92 \pm 7,09$; and $57,74 \pm 7,30$ mg/dL. Cholesterol level respectively were $124,55 \pm 32,28$; $115,57 \pm 24,47$; and $92,96 \pm 16,97$ mg/dL. Albumin level respectively were $3,97 \pm 0,2$; $3,83 \pm 0,18$; and $3,79 \pm 0,13$ g/dL. BUN serum level respectively were $20,30 \pm 5,87$; $20,16 \pm 4,71$; and $16,62 \pm 5,63$ mg/dL. Total protein and creatinine showed no significant difference ($P > 0.05$) between parturition group. Creatinine serum level on parturition 1, 2 and 3 respectively were $0,79 \pm 0,2$; $0,84 \pm 0,19$; and $0,87 \pm 0,25$ mg/dL. Total protein serum level respectively were $6,53 \pm 1,98$; $7,05 \pm 1,98$; and $6,77 \pm 1,89$ g/dL. It was concluded that does in Group 1, 2 and ≥ 3 still feasible for breeding and lactation program.

Keywords: Blood serum profile, iron level, parturition, lactating goats