



UPAYA PENYELAMATAN KAMBING GEMBRONG MELALUI PERSILANGAN

INTISARI

Bayu Andri Atmoko
16/407967/SPT/00178

Penelitian ini bertujuan untuk mengeksplorasi penurunan populasi kambing Gembrong di Bali dan melakukan upaya penyelamatan kambing Gembrong melalui persilangan. Penelitian ini dibagi 3 tahap. Tahap I dilaksanakan di Provinsi Bali, pada bulan Mei 2016 dan Januari-Februari 2019. Penelitian dilakukan secara *Participatory Rural Appraisal* dengan wawancara, observasi, pengukuran dan penimbangan ternak. Tahap penelitian II-III dilakukan di Fakultas Peternakan Universitas Gadjah Mada pada bulan Agustus 2017-Desember 2018. Tahap II dilakukan persilangan melalui inseminasi buatan (IB) 14 sperma beku kambing Gembrong pada 14 induk kambing Peranakan Etawah (PE). Tahap III dilakukan perkawinan alami, satu pejantan kambing Gembrong dengan 15 induk kambing PE dan 15 induk kambing Bligon, mengukur kinerja induk, mengukur produktivitas dan mengamati karakteristik anak hasil persilangan sebanyak 40 ekor. Hasil penelitian tahap 1 diperoleh total populasi sebanyak 57 ekor yang tersebar pada 7 lokasi pada tahun 2016, dan tahun 2019 tersisa 46 ekor tersebar di 6 Lokasi, sehingga terjadi penurunan 19,30%. *Historical timeline* menunjukkan populasi kambing Gembrong cenderung mengalami penurunan sejak tahun 1980-2012. Penurunan populasi akibat rendahnya produktivitas kambing Gembrong yaitu interval kelahiran > 1 tahun dan mortalitas pra sapih hampir 40%. Motilitas dan viabilitas sperma kambing Gembrong adalah 80 dan 86%. Persentase induk kambing PE berahi adalah sebesar 100%, mulai 24 jam ($P < 0,05$) setelah sinkronisasi dan persentase kebuntingan adalah 0%. Tingkat kebuntingan induk kambing PE dan Bligon adalah 100% pada kawin alam dengan pejantan kambing Gembrong. Jumlah kelahiran, *litter size* dan *sex ratio* masing-masing adalah 21 ekor; $1,40 \pm 0,51$; $61,90:38,10\%$ pada induk PE dan 19 ekor; $1,27 \pm 0,46$; $47,37:52,63\%$ pada induk Bligon. Rataan bobot lahir anak kambing Gembrong x PE lebih tinggi ($P < 0,05$) dibandingkan Gembrong x Bligon pada tipe kelahiran kembar ($2,34 \pm 0,40$ vs $1,93 \pm 0,44$ kg). Bobot sapih, perubahan bobot badan harian, konsumsi susu, dan mortalitas pra sapih anak kambing Gembrong x PE dan Gembrong x Bligon adalah $7,77 \pm 1,94$ kg, $65,50 \pm 15,72$ g/ekor/hari $412,61 \pm 78,64$ g/ekor/hari, 26,57% dan $7,39 \pm 1,41$ kg, dan $62,50 \pm 15,45$ g/ekor/hari, $420,98 \pm 210,91$ g/ekor/hari, 30,84%. Disimpulkan bahwa penurunan populasi kambing Gembrong di Bali cukup drastis yang disebabkan karena produktivitas kambing Gembrong cukup rendah dengan pola pemeliharaan yang masih tradisional. Inseminasi buatan tidak menghasilkan kebuntingan. Kinerja induk kambing PE dan Bligon, produktivitas dan karakteristik anak kambing hasil persilangannya G1 adalah sama.

Kata kunci: Inseminasi buatan, Kambing Gembrong, Kinerja induk, Persilangan, Produktivitas pra sapih,



CONSERVING OF GEMBRONG GOAT THROUGH CROSSBREEDING

ABSTRACT

Bayu Andri Atmoko
16/407967/SPT/00178

This study aims to explore the decline in population of Gembrong Goats in Bali and conserving the Gembrong goat through crossbreeding. This research was divided into 3 stages. Stage I was conducted in the Bali Province in May 2016 and January-February 2019. The research was conducted by participatory rural appraisal with interviews of farmers, observations, measurements of goats. Stage II-III was conducted at the Faculty of Animal Science, Universitas Gadjah Mada in August 2017 to December 2018. Stage II was carried out crossbreeding by artificial insemination (AI) of 14 frozen semen of Gembrong goat for 14 heads of Etawah Grade (PE) does. Stage III was carried out crossbreeding by natural mating of one Gembrong buck with 15 head of Etawah Grade and 15 head of Bligon does, it was measured for reproductive performance, the productivity and observed the characteristics of 40 head of crossbred kids. The results of the first phase of the study was obtained a total population of 57 heads spread at 7 locations in 2016, and 46 head spread at 6 locations in 2019, the population decreased by 19.30%. Based on historical timeline, the population of the Gembrong Goat tended to decrease since 1980-2012. The decrease due to low productivity of the Gembrong goat with kidding interval >1 year and pre-weaning mortality was almost 40%. The motility and viability of sperm from Gembrong goats was 80 and 86%. Percentage of estrous responses of PE does was 100%, starting 24 h ($P < 0.05$) after synchronization and the percentage of pregnancy with artificial insemination was 0%. The pregnancy rate of Etawah Grade and Bligon does crossed with Gembrong buck through natural mating was 100%. The number of kids, litter size and sex ratio were 21 head; 1.40 ± 0.51 ; 61.90: 38.10% for PE does and 19 head; 1.27 ± 0.46 ; 47.37: 52.63% for Bligon does. The average of birth weight of Gembrong x PE was higher ($P < 0.05$) compared to Gembrong x Bligon at the twin birth types (2.34 ± 0.40 vs. 1.93 ± 0.44 kg). Weaning weights, average daily gain, milk consumption, and pre-weaning mortality of kids resulting from Gembrong x PE and Gembrong x Bligon were 7.77 ± 1.94 kg, 65.50 ± 15.72 g/head/day, 412.61 ± 178.64 g/head/day, 26.57% and 7.39 ± 1.41 kg, and 62.50 ± 15.45 g/head/day, 420.98 ± 210.91 g/head/day 50%. It is concluded that the population decrease of the Gembrong goat in Bali was drastically due to the low productivity of the Gembrong goat with traditional daily management. Artificial insemination does not produce pregnancy. The performance of the PE and Bligon does, the productivity and characteristics of the G1 crossbred kids were similar.

Keywords: Artificial insemination, Gembrong goat, Reproductive performance, Crossbreeding, Pre-weaning productivity.