Effect of mating season and type of breed on the productive performance of goats agroecologic production system in the Northeastern Brazil,

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Abstract **Resumo:**

The Brazilian goat herd is estimated in 11.2 million animals, where approximately 90% are raised in the Northeastern region. This work aimed to evaluate the effect of mating season and type of breed on the reproductive performance of goats raised in an agroecologic production system in the semi-arid region of Northeastern Brazil. This production system is based on the techniques recommended by organic certification rules which are characterized by elimination of chemical products to obtain a meat with better sanitary quality and using a proper stocking rate for the biome of Caatinga. An average of 47 goats were evaluated for three mating season (EM) during two years, as following: EM1 (March/April), EM2 (November/December) and EM3 (July/August). There were three types of breeds: Boer, Anglo-nubian and Caninde. It was used a factorial random design 3x3 (three mating seasons x three breeds). Significant difference was not observed (P>0.05) among mating seasons on parturition rate and prolificity. It was found an average of 62% for parturition rate, 1.3 for prolificity and a kidding interval of 10 months (1.2 kids/ parturition). The born weights of crossbreed kids from Boer were significantly higher (P <0.05) than Caninde (3.3 kg vs. 2.0 kg, respectively). The same happened to the weight at weaning (90 days old). The crossbreed kids coming from Boer or Anglo-nubian were heavier (P <0.05) than Caninde (13.0 vs. 8.0 kg, respectively). The kids born in the dry period of the year (from EM1 and EM2) had loss of weight. Compared to the typical extensive production system in the semi-arid region, the goat agroecologic system showed a similar productive performance. The introduction of an exotic breed can be an alternative to improve the productive performance of goats raised in the semi-arid area of the Northeastern Brazil. Keywords: animal performance, ecological goat, Caatinga, sustainable environment.