The objective of this study was to evaluate the forage production capacity of forage oat genotypes in order to recommend more adapted and productive genotypes in the region of Londrina, PR. The experimental period was from May 14 to November 21, 2017, at the School Farm of the State University of Londrina. The treatments were 11 oat genotypes, with five black oat genotypes: IPR Cabocla (T), UPFA 21 Morenininha, Iapar 61 (Ibiporã), UPF 134, UPF 137, and six white oats: IPR Esmeralda (T), FAPA 2, FUNDACEPFAPA 43, IPR 126, Supreme IPR and UPFA D1-3AP. The experimental design was in a randomized block with four replicates. The planting was done manually, consisting of 5 rows of 4.0 m, spaced 0.17 m (4.0 m²). The collections were carried out in the three lines in four linear meters, being the first cut when the plants reached 20 to 25 cm, leaving a residue of 6 to 8 cm. The other cuts were performed when the plants reached 30 to 35 cm in height, leaving 7 to 10 cm of residue. The last cut was performed when up to 50% of the plants reached the rubber stage. After each cut 20 kg ha⁻¹ of nitrogen was applied per plot. The samples collected were weighed and pre-dried in a forced circulation oven to estimate forage mass (kg ha⁻¹ dry matter) of each cut. In order to estimate the total forage mass (kg ha⁻¹ of dry matter) in the cycle, the total forage mass of all cuts was performed. The data were submitted to analysis of variance and when there was significance by the F test, the means were compared by the Tukey test at 5%, using SAS (2000). The genotype UPF 137 and IPR Suprema showed the highest forage production, (9429 and 9077 kg ha⁻¹ of DM, respectively), due to the greater number of cuts obtained (5), while the majority of genotypes had 4 cuts during the cycle. The average total production was 6198 kg h⁻¹ of MS. The lowest yields of total forage were observed for IPR Cabocla, UPF 134, IAPAR 61 and UPFA 21 oats. The cycle of utilization ranged from 107 to 192 days. The genotypes UPFA 137 and IPR Suprema presented better forage production results and the greater number of cuts. IPR Suprema was the latest among all and the IPR Cabocla, UPFA 21, UPF 134 and IPR Esmeralda the earliest.

Keywords: Avena sativa, forage mass, winter forages.

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