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PHENOLOGICAL ATTRIBUTES OF COMMON BEAN, COWPEA AND LIMA BEAN

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RESUMO

The phenological phases of the plants are influenced by abiotic and biotic factors, and these have proven effects on the productivity of the bean plant. As a result of this, bean genotypes in BAGs must have their phenological stages characterized to maximize their use in breeding programs. Therefore, this research aimed to perform the phenological characterization of four common bean genotypes (*Phaseolus vulgaris* L - PV), eight cowpea genotypes (*Vigna unguiculata* (L.) Walp. - VU), and one lima bean genotype (*Phaseolus lunatus* L - PL). The experiment was carried out in the greenhouse of the State University of Mato Grosso/Alta Floresta-MT. The design was completely randomized with thirteen treatments and ten replications. Phenological stages were assessed using a scale established for the crop (V0-R9) and the number of days between emergence and flowering (DEF) was also calculated. The number of flowers was recorded daily on all plants and the peak of flowering was estimated (highest number of flowers open on a single day). The vegetative and reproductive phenological development of the thirteen bean genotypes ranged from 22 to 36 days and 36 to 59 days respectively. The genotypes PV06 and PV08 had the lowest DEF at 30 days each and were the genotypes that reached complete maturity the shortest time, both at 63 days. Regarding flowering, with 43 flowers, genotype PL13 showed the highest number of flowers at anthesis on a single day, while, VU10 was the genotype with the fewest flowers open on a single day (5 flowers). In conclusion, the thirteen bean genotypes have phenological variability and potential genetic resources to be conserved and used in breeding programs aiming to obtain earlier materials that mature faster.

PALAVRAS-CHAVE: Phenological stages, Phaseolus, Vigna

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