III Encontro Científico de Produção Animal Sustentável
05 de outubro de 2012
Instituto de Zootecnia, Nova Odessa, SP
ISSN 1981-4100 (On-line)

VIABILITY OF *Macrotyloma axillare* CV. GUATÁ SEEDS UNDER CHEMICAL SCARIFICATION

VIABILIDADE DE SEMENTES DE MACROTYLOMA AXILLARE CV. GUATÁ SUBMETIDAS A ESCARIFICAÇÃO QUÍMICA

SULEIZE ROCHA TERRA[1], THIAGO PEREZ GRANATO[1], WALDSSIMILER TEIXEIRA DE MATTOS[1], LUCIANA GERDES[1], ALESSANDRA APARECIDA GIACOMINI[1]

[1]Centro de Pesquisa e Desenvolvimento em Nutrição Animal e Pastagem (CPDNAP), Instituto de Zootecnia (IZ), Agência Paulista de Tecnologia dos Agronegócios (APTA), Secretaria de Agricultura e Abastecimento do Estado de São Paulo (SAA), Rua Heitor Penteado, 56, Centro, CEP 13460-000, Nova Odessa, SP, Brasil. E-mail: suleize@iz.sp.gov.br

The use of the associacion of grasses and legumes results in a good forage yield as well as a good animal performance due to maintenance of adequate levels of crude protein (CP) in the animal diet, both the direct effect of the ingestion of legumes, or even through indirect effect of the introduction of nitrogen by legumes in the pasture, thereby increasing the production of forage mass. However, the seeds of legumines have the so-called hardness seeds or dormant according to their coats impermeable to water. The hardness of the seed prevents the germination of the same since these seeds have a hard shell impervious to water and gas exchange, not allowing the imbibition of water by the seed, or embryo oxygenation. This dormancy may be broken by various known methods such as scarification, promoting cracks in the seed coat allowing the entry of water therein. In the case of *Macrotyloma axillare* exposure of seeds to scarification method has proven to be an efficient way to break dormancy and promoting seed germination. The aim of the present work was to evaluate the viability of seeds after suffering dormancy by immersion seeds in sulfuric acid. The experiment to break dormancy *Macrotyloma axillares* cv. Guatá was conducted in the laboratory of Plant Physiology at the Intituto de Zootecnia in Nova Odessa, São Paulo State, using the seeds that were stored in a cold room with temperatures between 10-12 ºC, relative humidity (RH) 30-33% and no light. The treatments studied were: control, chemical scarification with sulfuric acid for 5, 10, 15, 20, 30 and 40 minutes. We used a completely randomized design with two replications, being 100 seeds each repetition. After treatment the seeds were under to tetrazolium test resulting in viable seeds and seed viability. So the result of the tetrazolium test was obtained by average percentage of viable seeds, found in the repeats tested, respecting the maximum tolerances set out in Brazilian Rules for Seed Analysis 2009. According to statistical analysis of the different treatments, it was observed that the scraping of the seeds in sulfuric acid for 20, 30, 40 minutes had a minor amount of viable seeds even compared to control, these results show that scarification with sulfuric acid at longer times (20, 30, 40) can damage the seed embryo. However there was no statistically differences between the treatments with sulfuric acid for 5, 10 and 15 minutes, but the seed scarification with sulfuric acid for 10 minutes presented the best result for mean percentage viable seed.

Key words: sulfuric acid, dormancy, forage legume.