Emha avisena. Perlakuan H_2SO_4, Air panas, dan Pengamplasan Untuk Pematahan Dormansi Benih *Mucuna bracteata.* Dibawah Bimbingan Ami Suryawati dan Nurngaini

ABSTRAK

Mucuna bracteata merupakan tanaman penutup tanah yang juga merupakan tanaman yang relatif baru penggunaannya di perkebunan. Kendala yang masih dihadapi dalam perbanyakan *Mucuna bracteata* melalui biji adalah rendahnya persentase daya berkecambah, dikarenakan biji *Mucuna bracteata* memiliki kulit biji yang keras sehingga diperlukan perlakuan khusus. Penelitian dilaksanakan di Laboraturium Pemuliaan Tanaman Fakultas Pertanian UPN "Veteran" Daerah Istimewa Yogyakarta. Waktu penelitian dilakukan mulai bulan Februari sampai April 2015. Penelitian ini menggunakan metode percobaan tunggal, yaitu cara pematahan dormansi yang disusun menggunakan Rancangan Acak Lengkap (RAL). Perlakuan merupakan faktor tunggal yang terdiri atas 9 aras perlakuan dengan 4 ulangan, yaitu P1 = kontrol (tanpa perlakuan), P2 = perendaman larutan asam sulfat H_2SO_4 85% selama 30 menit, P3 = perendaman air panas dengan suhu awal 75^0C selama 2 jam, P4 = perendaman air panas dengan suhu awal 90^0C selama 2 jam, P5 = perendaman air panas dengan suhu awal 90^0C selama 4 jam, P6 = pengamplasan kulit benih *Mucuna bracteata*, P7 = larutan asam sulfat H_2SO_4 85% selama 30 menit diteruskan perendaman air panas dengan suhu awal 40^0C selama 2 jam, P8 = pengamplasan kulit benih *Mucuna bracteata* diteruskan perendaman air panas dengan suhu awal 40^0C selama 2 jam, P9 = pengamplasan kulit benih *Mucuna bracteata* diteruskan perendaman air panas dengan suhu awal 40^0C selama 4 jam. setiap perlakuan terdiri atas 25 benih dan jumlah benih yang diperlukan 9 x 4 x 25 = 900 benih. Data hasil pengamatan dianalisis dengan sidik ragam pada jenjang nyata 5%, untuk mengetahui beda nyata antar perlakuan diuji lanjut dengan *Duncan's Multiple Range Test* (DMRT) pada jenjang nyata 5%. Benih yang diberi perlakuan perendaman larutan H_2SO_4, perendaman menggunakan air panas, dan pengamplasan nyata lebih baik viabilitas, vigor serta pertumbuhan bibitnya dibanding tanpa perlakuan. Perlakuan perendaman asam sulfat H_2SO_4 85% selama 30 menit dilanjutkan perendaman air panas 40^0C selama 2 jam (P7) nyata lebih besar viabilitas, vigor serta pertumbuhan bibitnya dibanding tanpa perlakuan (P1), perendaman asam sulfat H_2SO_4 85% 30 menit (P2), perendaman air panas 75^0C selama 2 jam (P3); 90^0C selama 2 jam (P4), 90^0C selama 4 jam (P5), Penggoresan kulit benih (P6), penggoresan kulit benih dilanjutkan perendaman air panas 40^0C selama 2 jam (P8) serta selama 4 jam (P9). Kata Kunci: *Mucuna bracteata*, H_2SO_4, Air Panas, pengamplasan. x

Emha avisena. H2SO4 treatment, hot water, and Sanding To Fracture *Mucuna bracteata* Seeds Dormancy. Under Guidance Ami Suryawati and Nurngaini

ABSTRAK Mucuna bracteata is a cover crop that is also a relatively new crop use in plantations. Hurdles in *Mucuna bracteata* propagation through seed is the low percentage of germination, because the seeds of *Mucuna bracteata* have a hard seed coat that required special treatment. Research conducted at the Laboratory of Plant Breeding, Faculty of Agriculture UPN "Veteran" Yogyakarta. The research was conducted from February to April 2015. This study uses a single experiment, that means breaking dormancy compiled using completely randomized design (CRD). The treatment is a single factor consisting of 9 levels of treatment with 4 replicates, ie P1 = control (no treatment), P2 = soaking solution of sulfuric acid H2SO4 85% for 30 minutes, P3 = immersion hot water with a starting temperature 75^0C for 2 hours, P4 = immersion hot water with a starting temperature 90^0C for 2 hours, P5 = immersion hot

water with a starting temperature 90^{0}C for 4 hours, P6 = sanding the skin seeds of *Mucuna bracteata*, P7 = solution of sulfuric acid H2SO4 85% for 30 minutes forwarded immersion hot water with temperature beginning 40^{0}C for 2 hours, P8 = sanding skin soaking the seeds of Mucuna bracteata forwarded hot water with a temperature of 40^{0}C for 2 hours early, P9 = sanding skin soaking the seeds of Mucuna bracteata forwarded hot water with a temperature of 40^{0}C for 4 hours early. each treatment consisting of 25 seeds and number of seeds required 9 x 4 x 25 = 900 seeds. The data were analyzed by ANOVA at 5% significance level, to know the real difference between treatments was tested further by Duncan's Multiple Range Test (DMRT) at the 5% significance level. Seed treated with H2SO4 solution immersion, submersion using hot water, and markedly better sanding viability, vigor and growth of seedlings compared with no treatment. Soaking treatment of sulfuric acid H2SO4 85% for 30 minutes followed immersion hot water 40^{0}C for 2 hours (P7) is significantly greater viability, vigor and growth of seedlings compared with no treatment (P1), immersion sulfuric acid H2SO4 85% 30 minutes (P2), immersion 75^{0}C hot water for 2 hours (P3); 90^{0}C for 2 hours (P4), 90^{0}C for 4 hours (P5), Streaking the seed coat (P6), etching the seed coat 40^{0}C hot water immersion was continued for 2 hours (P8) and for 4 hours (P9).
Key words: *Mucuna bracteata*, H2SO4, Hot water, sanding.