

Parinee Jeammuangpuk 2012: Effect of Seed Coating on Seed Quality and Storage of Peanut. Master of Science (Agronomy), Major Field: Agronomy, Department of Agronomy. Thesis Advisor: Associate Professor Juangjun Duangpatra, Ph.D. 126 pages.

Germination and vigor of two lots of Tainan 9 peanut seeds coated with nine different treatments of fungicides and insecticides and non-coated seeds were significantly different. Coated peanut seed with polymer (T2), polymer+(carboxin+thiram) (T4) and polymer+dinotefuran+hymexazol (T10) were lower in germination and vigor than the non-coated seeds (T1). After 6 months storage at 15°C-75% RH and at ambient condition, germination and seed vigor of these three treatments were lower than the non-coated seeds. Therefore T2, T4 and T10 which were considered as unsatisfied seed treatments were discarded. The other six seed coating treatments: polymer+captan (T3), polymer+(quintozine+etridiazole) (T5), polymer+captan+fipronil (T6), polymer+(carboxin+thiram)+fipronil (T7), polymer+(quintozine+etridiazole)+fipronil (T8) and polymer+captan+(carboxin+thiram) (T9) which were higher in germination and seed vigor than the non-coated seeds (T1) both before and after six months storage at 15°C-75% RH and ambient condition were higher in field emergence than the non-coated seeds. The non-coated seeds were higher in percentages of stem rot than the coated seeds both in the nursery and field tests. T3, T8 and T9 were the lowest in stem rot percentages followed by T5 and T6, where as T7 were the highest but lower than the non-coated (T1). Therefore, polymer+captan (T3), polymer+(quintozine+etridiazole)+fipronil (T8) and polymer+captan+(carboxin+thiram) (T9) were the best seed coating treatment for controlling stem rot. Tainan 9 peanut seed coated with theses three treatments gave higher seed germination, seed vigor in laboratory, field emergence and pod yield than the non-coated and other coating treatments.

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Student's signature

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Thesis Advisor's signature