

Uzun A (2011) Effect of maturity stage and seed treatment on germination, seed dormancy, and certain pod and seed traits of common vetch (*Vicia sativa* L.). *Journal of Food, Agriculture & Environment*, 9 (3&4):189-192.

Abstract

Germination and emergence are important issues for seed production in common vetch. Maturation stage and harvest time may affect the germination and dormancy of seeds. In this study, two experiments were conducted on common vetch. In Experiment I, the effects of two varieties (Emir and Gulhan) and three maturation stages (full-seed pod, yellow pod and brown pod) on the pod and seed characteristics of common vetch were determined. In this experiment, pod fresh weight, pod length, pod width, seed width, fresh weight, seed dry weight and moisture content of seeds were measured. In Experiment II, the effects of varieties and maturation stages and three seed treatments (fresh, air-dried and dry-prechilled) on germination and seed dormancy were investigated. In Experiment I, significant differences were found among common vetch varieties and maturation stages in all characteristics measured. Maximum fresh pod weight (1596.5 mg pod⁻¹), fresh seed weight (137.1 mg seed⁻¹) and dry seed weight (80.9 mg seed⁻¹) were obtained for the Gulhan variety. The highest fresh pod weight (2015.3 mg pod⁻¹), pod length (58.3 mm pod⁻¹), pod width (7.0 mm pod⁻¹), seed width (5.3 mm seed⁻¹) and fresh seed weight (180.2 mg seed⁻¹) were found at the YP (yellow pod) stage. The highest seed dry weight (94.9 mg seed⁻¹) and moisture content (658.5 g kg⁻¹) were obtained at the BP (brown pod) and the FS (full seed pod) stages, respectively. In Experiment II, there were significant differences among varieties, maturation stages and seed treatments in all of the characteristics measured. The percentage of dormant seeds was highest for the Emir variety (26.7%), for the YP stage (31.6%) and for the fresh treatment (61.4%). According to the results of this study, the BP stage was the most suitable harvest time for both varieties, and the highest germination percentage was obtained after air-drying.