Agronomic characteristics of wild soybean (Glycine soja Sieb. et Zucc), cultivated soybean (Glycine max (L.) Merrill), and their hybrids were assessed for use as background information for environmental risk assessment of soybean products with biotechnology traits. Two G. soja accessions were crossed with non transgenic G. max cultivars. Hybrid generations (F₁ and F₂ plants) and parental entries were grown in a completely randomized design (CRD) in growth chambers in 2011/2012. Plant twining habit, flowering date, maturity date, plant height, stem diameter, number of pods, number of seeds, and 100 seed weight were evaluated for both parents and the hybrids. Our data indicated that most of the characteristics measured had an intermediate phenotype between G. soja and G. max. These results suggest that the general ability of hybrids to compete in nature will be reduced when compared to wild soybean. This reduction may be in part due to G. max contributing domestication genes to the hybrid genome. It follows that it is unlikely that hybrids between G. soja and G. max can become more competitive than G. soja under natural conditions.

Keywords: Glycine soja, Gene Flow, Outcrossing