

Morphological evaluation of the USDA, NPGS *Medicago truncatula* collection

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Medicago truncatula Gaertner serves as a model in genomic research on leguminous species. In 2003, this species accounted for over 50 % of *Medicago* seed requests. To better serve the user community, we carried out an extensive morphological evaluation of the entire collection in 2003. A total of 314 accessions were evaluated for 37 traits in a replicated trial. The following tables summarize the traits evaluated. This information will be placed into GRIN (www.ars-grin.gov/npgs) and is available for use.

Trait	Description
Growth Stage	Days from sowing to:
Cotyledon	fully expanded cotyledon
Unifoliate	unifoliate leaf
First trifoliate	first trifoliate leaf
Second trifoliate	second trifoliate leaf
Vegetative	start of vegetative growth period
First flower	first plant with open flowers
Last flower	first plant with dried flowers
Green pod	first plant with full green pod
Brown pod	first plant with brown pod
Senescence	90% of plants dead
Morphology	
Cotyledon length, width	Cotyledons expanded, and true leaf barely visible
Leaf mark	Leaflet mark position, shape, color
Length, width, widest point	Taken prebloom on leaflet, between second and third internode
Serration	Number of serrations on one side of leaflet
Pubescence	Number of hairs on top side of leaflet
Branch	Base to end of longest branch
Basal branches	Number of basal branches within 2 cm of root
Stem diameter	Base of plant
Internode	Length of third internode from base of longest branch
Flower number	Number of flowers per peduncle
Flower	Length of standard
Calyx	Length of calyx
Pod	Diameter taken at widest coil, excluding spines
Spine	Length of longest spine on pod
Adpression	Degree of adpression of fruit coils
Density	Density of hair on outer coil surface of fruit
Peduncle	Length of fruiting stem
Petiole	Length of subtending petiole
Coils	Number of fruit coils
Pod weight	Grams of pods per plant
Herbage	Cut, dry and weigh entire plant