



## ISURF#04957: Dwarf leafy amaranth variety DB-2008910

**ISU Breeder:** David M. Brenner (Department of Agronomy and Plant Introduction Station)

Iowa State breeder, David Brenner released a short leafy grain amaranth (*Amaranthus cruentus*) variety DB 2008910. The variety has a leafy spinach-like appearance when the plants are 20 cm height at the leafy stage before the inflorescence emerges. The shortness is because of short internodes, about 1.5 cm long between leaves on erect and not-lodging stems. The dwarfness is of interest for genetic studies of amaranth dwarfism. Besides genetic stability through three generations, genetic dwarfness was demonstrated by crossing with standard-size *Amaranthus cruentus* (PI 636182) the dwarfness was recessive. So, in the F1 generation, the plants were standard-size, and in succeeding generations dwarf plants of many sizes were recovered, and not just one size of dwarf, indicating interactions of multiple genes. The seedling stems, adult stems, leaves, and flowers of DB 2008910 are all green (without red coloring). Each plant has about 20 leaves in the first flush of growth, and then later, small leaves grow from the leaf axils. The seed holding utricles are non-shattering, so the seeds remain on the plant with little shattering. The seeds are white, with translucent starch. The plants are adapted for field growing in Iowa without unusual illness or vulnerabilities.



There are two proposed uses for DB 2008910. (1) It can be used as a parent of new dwarf amaranth cultivars for grain production, and (2) since it has many leaves in proportion to its stem, it may be useful for leafy vegetable production. This Amaranth variety is available for licensing to Amaranth breeders worldwide. Questions regarding the variety may be directed to the breeder, David Brenner at G212 Agronomy Hall, Iowa State University Ames, IA 50011 or by phone (515-294-6786) or email ([dbrenner@iastate.edu](mailto:dbrenner@iastate.edu)).

If you have any questions regarding the licensing of this variety, please contact Dr. Yi Wu by phone (515-294-9442) or email ([germplasm@iastate.edu](mailto:germplasm@iastate.edu)).