Registration of ‘Devine’ Little Burr Medic

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‘D’evine’ (Reg. No. CV-273, PI 642778) little burr medic [Medicago minima var. minima (L.) Bart.] was developed by the Texas Agricultural Experiment Station and released in 2005. Devine originated from a naturalized stand in a pasture on the Anderlitch Ranch south of Farm to Market Road 2200 and west of Devine, TX, 56 km southwest of San Antonio. Evaluation of spaced plants of the original collection revealed very little variation among plants, therefore the original accession was increased without selection. Devine was tested under the designation of BEDEV and Devine.

Little burr medic is a winter annual legume native to the Mediterranean region. Little burr medic was introduced into Texas more than 75 yr ago and became widely naturalized (Diggs et al., 1999). An exhaustive review of the literature by Fresnillo Fedorenko (2000) indicates little burr medic is widespread in Mediterranean-type climates of southern Australia, Mexico, California, Argentina, Chile, and the Cape region of South Africa. We have collected it from many semiarid locations in Texas. This is the first cultivar of M. minima to be released anywhere. Many commercial annual medics from Australia are well adapted to the calcareous soils of south and central Texas, but they lack adequate freeze tolerance and hard seededness (Ocumpaugh et al., 1997). In 1998, ‘Armadillo’ burr medic (M. polymorpha L.) was released by the TAES-Beveille Forage Program (Ocumpaugh et al., 2004). Armadillo exhibited superior winterhardiness to all the Australian annual medic cultivars we have tested, but it is subject to freeze damage in some years north of 31° N lat in Texas. Devine little burr medic was released to provide a winter annual legume that will persist and spread in pastures in the central region of Texas from 29° N lat (southward to about 100 km south of San Antonio) to 31° N lat. Devine produces more forage and reseeds better in the regions of Texas than Armadillo. It has a higher level of hard seedness, which allows the seed to persist for several years, including those following a dry year.

Dry matter yields of Armadillo and Devine are superior to those of Australian commercially available medics. Armadillo of about 4500 kg ha⁻¹ yr⁻¹ are comparable to those observed over several years of evaluation of annual medic (M. truncatula Gaertn.) (Ocumpaugh et al., 2004) at Luling, TX, Armadillo produces 110 and 121% of Devine yields. Devine out-produced several legumes in 2004, to contribute to this superiority in the test. In north Texas, Devine will produce more forage than Armadillo, except in wet and mild winters, and will not kill in the cold winters in north Texas (Muir et al., 2005).

The primary advantage of Devine compared to commercial medics except Armadillo is reseed ability under severe grazing (Ueckert et al., 2003; 2004). All the medics show superior reseeding ability to most other cool-season annual legumes (Trifolium species). Research in the San Angelo, TX, area indicated that Devine and experimental black medic (M. lupulina) are the most promising for the San Angelo area of Texas (Ueckert et al., 2004). Devine little burr medic flowers and sets seed two or more weeks later than Armadillo burr medic. Seed clusters with three to five pods per cluster. The hard seed content of Armadillo (Muir et al., 2005) is about 1100 seeds g⁻¹ compared to about half that of Armadillo, and seed production is about half that of Devine. Devine has about 10% hard seed. Spine length on the burs of Devine is 2 to 3 mm. Devine out-produced several legumes in May harvests and produces more forage and reseeds better than all the other available medics (Muir et al., 2005).

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