

Register of Australian Herbage Plant Cultivars

B. Legumes

10. Macroptilium

(a) *Macroptilium atropurpureum* (DC.) Urban (atro) cv. Aztec

Reg. No. B-10a-2

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Originators: R. A. Bray and T. D. Woodroffe

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Origin

Aztec was bred by a backcrossing program to incorporate resistance to rust [caused by *Uromyces appendiculatus* (Pers.) Unger var. *crassitunicatus* J. Irwin (Irwin 1988)] into cv. Siratro. The variety is a mixture of 4 populations, each derived by backcrossing a rust-resistant accession of *Macroptilium atropurpureum* to Siratro for 4 generations (with selection of rust-resistant progeny) and then selfing for 2 generations to identify lines homozygous for rust resistance (Bray 1993). The original accessions and their geographic origins were: CQ1382 (El Salvador), CPI 85852 (Oaxaca, Mexico), CPI 90847 (Sonora, Mexico), and CPI 92640 (Colombia). These accessions were chosen for their widely different geographic origins and apparently different rust resistance genes (Bray *et al.* 1991). Ten backcross lines were maintained for each accession and bulked to form the final cultivar. No plant of Siratro was used as a parent in more than 1 cross in the final generation of backcrossing. All rust screening took place under glasshouse conditions (Bray 1988; Ogle *et al.* 1988). There was no selection for characters other than rust resistance.

Morphological description

Because of the breeding procedures, Aztec closely resembles its recurrent parent Siratro, except for rust

resistance. The morphological description of Siratro contained in the Register of Australian Herbage Plant Cultivars (Oram 1990) is therefore directly applicable to Aztec.

Agronomic characters

The main distinguishing feature of Aztec compared with Siratro is its resistance to rust. In field trials at Samford (south-east Queensland), rust has been present on Siratro at each of 3 harvests over 12 months but completely absent from Aztec. In a spaced plant trial at Grandchester (south-east Queensland), all 161 plants of Aztec observed were rust-free, while all 112 Siratro plants were badly infected.

Yield comparisons at Samford have shown an average 30% higher leaf production (ranging from 14% in summer to 48% in winter) from Aztec than Siratro over 12 months (R. A. Bray unpublished data).

Seed production is good, with about 1500 kg seed harvested from a 3-ha planting (J. Rains pers. comm.).

References

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