

**Committee on Available Breeding Lines**  
**Charles Brummer, Chair**

Members: Charlie Brummer, Chair; Stephanie Greene; JoAnn Lamb; Ian Ray

Visitors: John Caddell; George Vandemark

1. The germplasm releases registered in *Crop Science* since the 2000 meeting are presented in Table 1. This information will be input into GRIN, as well as information on registered cultivars.
2. JoAnn is in charge of handling alfalfa germplasm registrations with *Crop Science* and she indicated that none has been submitted for some time. The committee recommends that breeders register their germplasms if possible.
3. Stephanie and JoAnn will attempt to sort through the large collection of germplasm at Minnesota to determine what should be deposited in the GRIN system.
4. The committee again urges breeders and geneticists to deposit mutant stocks in the GRIN system.
5. The committee had a long discussion regarding germplasm enhancement—essentially, the type of breeding that leads to germplasm registrations. JoAnn pointed out that the NAAIC talks about evaluation and enhancement repeatedly, but never does anything about it. The big questions, of course, are what germplasm to use for enhancement and for what is the enhancement being done. A significant part of the collection has not been evaluated for various traits, so perhaps completing the evaluation of all the materials should be done first, in any case. The committee recommends that a plan be developed on enhancement to which everyone could contribute a small portion of their project's resources until new monies for enhancement are forthcoming from NPGS. This subject is being targeted by a subcommittee of the alfalfa CGC, chaired by Charlie Brummer.

Table 1. Germplasm releases subsequent to the 1998 report of the Committee on Available Breeding Lines.

Germplasm	PI No.	Trait(s) selected	Source Germplasm	Selection Method	Selection Location	Remarks and Reference
UMN 3176	610664	<i>Agrobacterium</i> -mediated transformation and regeneration in germplasm incapable of symbiotic N <sub>2</sub> fixation	Ineffective Agate (PI 536529), Ineffective Saranac (PI 536530), and Regen-SY (PI 537440)	Crossing Ineffective germplasms to Regen-Sy, intercrossing, selecting for non-nodulation and regeneration, and intercrossing	St. Paul, MN	98% of plants are non-nodulating and 55% regenerate. Samac and Lamb. 2000. CS 40:863-864.
NM-9D11A-AN3	NSSL 386506	Production under deficit irrigation; Resistance to Anthracnose ( <i>Colletotrichum trifolii</i> Bain) race 1	Wilson (Zia, Mesilla, Turkistan, Baker, NC-83-2)	Three cycles of phenotypic recurrent selection	Southern New Mexico	Forage yield superior to other cultivars under variable moisture and deficit irrigation conditions in southern NM; highly resistant to anthracnose race 1. Ray, Townsend, Henning, Currier, and Melton. 2000. CS 40:864.
OK 163	618616	Blue alfalfa aphid within a broad genetic base	OK populations derived from multiple PIs, Cimarron	Phenotypic recurrent selection; intercrossing	Oklahoma	Broad genetic base, adequate to good yields, blue alfalfa aphid resistance. Caddel, Zarrabi, Berberet, and Prater. 2002. CS 316-317.
OK 164	618617					
OK 187	618618					
OK 188	618619					
OK 189	618620					
OK 208	618621					
OK 190	619203	Resistance to blue alfalfa aphid, spotted alfalfa aphid, Phytophthora root rot.	555, Cimarron, WL320, CUF101, Arrow, OK 169, experimental pops.	Interpollination of populations and seed increase	Oklahoma	Broad genetic base, adequate yield, multiple pest resistance. Caddel, Zarrabi, Berberet. 2002. CS 42:992-993.