Simplified germination of perennial Cicer species. (C08coyne151549-Poster)

Authors:

- C.J.Coyne* USDA-ARS, Pullman, WA
- T.Vincent USDA-ARS, Pullman, WA
- M.Cashman USDA-ARS, Pullman, WA

Abstract:

The NPGS chickpea collection consists of cultivated Cicer arietinum (4459 accessions) containing genetic diversity immediately accessible for breeding, and wild uncultivated species that may be of importance in the future. The wild chickpea species in the collection include 113 accessions of five annual Cicer species and 65 accessions representing 14 perennial species. An in vitro germination method was used to provide uniform germination of the perennial species with the goal of establishing a nursery for regeneration and evaluation of inter- and intra- accession genetic variability. In 2001, 28 accessions of 9 wild species were surface disinfested, scarified, and cultured under sterile conditions on Difco Bacto agar. The average germination of 26 accessions of 8 species was 82%. One species, C. monbretii (2 accessions), failed to germinate in vitro. In 2002, additional accessions were successfully germinated with the same method. An experiment was conducted to test the effects of Murashige and Skoog (MS) mineral nutrients plus agar vs. unamended agar on germination. The percent germination was similar; however, MS amended agar reduced root growth.

Corresponding Author Information:

Clarice Coyne USDA-ARS, Pullman, WA phone: (509) 335-3878 e-mail: coynec@wsu.edu

WA

59 Johnson Hall, WSU Pullman, WA 99164

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