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A new, highly fertile microconidiating combination, dingy, fluffy

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Abstract
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The double mutant peach fluffy has long been used as a source of microconidia in situations where exclusively uninucleate cells are required (Barratt and Garnjobst 1949 Genetics 34). The usefulness of pe fl has been limited by two disadvantages -- low viability of microconidia, and low fertility and productivity of homozygous crosses. Improvements in viability have been reported (Barratt 1964 Neurospora Newsl. 6; Munkres 1977 Neurospora Newsl. 24). Sufficient ascospores can be obtained from pe fl homozygous crosses to do extensive analyses (e.g. D.A. Smith 1974 Genetics 76), but such crosses require special effort and are slow to mature.

When the linkage group IV marker dingy (38502d, Mitchell and Mitchell 1954 PNAS 40) is substituted for peach, the double mutant dn; fl resembles pe fl phenotypicolly, producing no macroconidia and abundant grey, uninucleate microconidia. Unlike pe fl, the new combination is highly fertile in homozygous crosses and as a female parent. Perithecia and ascospores are produced as quickly and abundantly as in crosses between wild types or fluffy strains. The new genotype thus appears promising as a substitute for pe fl, especially where microconidiating strains are to be intercrossed.

Stocks are available from FGSC (dn; fl A, No. 3517; dn; fl a, No. 3518). - - - Department of Biological Sciences, Stanford University, Stanford, CA 94305.