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Abstract

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McNelly, Caroline. Growth of a histidine strain. hist-2 (C94). of Neurospora crassa.

The abundance of growth and conidiation of the double mutant, hist-2, nic-2 (C94, 43002), was found to decrease as the strain was successively backcrossed to either Lindegren or Abbott wild-type. Using a conidial suspension as inoculum, the following media were tested:minimal reproductive (Westergaard and Mitchell, 1945), pH 6.7, with histidine and nicotinamide added in a ratio 1:1 and 2:1; malt. peptone and yeast medium (Frost. this Newsletter) pH 6.5. with histidine and nicotinamide added in a 1:1 ratio; and complete malt medium. pH 6.5. supplemented with histidine only. All showed sparse growth and slight conidiation. Bacto-peptone medium (Frost. this Newsletter). pH 5.0. with no supplement and with added histidine: nicotinamide ratios of 1:0, 1:1, 1:2, and 2:1, also showed poor growth. However, this medium adjusted to pH 6.5 - 6.7 showed wild-type growth and conidiation in all cases where histidine had been added. The same results were found for ascospore germination from the cross cr. +, + (F945) x +, hist-2, nic-2 (C94, 43002). It has been found that bactopeptone from different sources varies widely and the ratio of histidine to nicotinamide added must be adjusted to suit the batch of peptone used. In all cases, however, wild-type growth and conidiation is achieved only at pH 6.5 - 7.0.