segregating in the progeny in approximately a 1:1 ratio. In the light of these results, it is assumed that the c-m allele expresses a coarse pattern that is modified by a second factor resulting in a fine pattern. However, the nature of this second factor remains unknown.

Attempts have been made to determine if the second factor is En itself. Plants grown from the coarse kernels of the original testcross of fine plants (c-m Sh Wx/c sh wx x c sh wx/c sh wx) were sibcrossed by colorless shrunken sibs known to contain En (c sh wx/c sh wx En). The results are given in Table 2. Among the 53 tested, 26 showed segregation of coarse and fine patterns. In view of the absence of segregation for coarse and fine types in all of the progenies, even in the presence of En, there is a strong indication that the second factor modifying the coarse pattern is not En. Further tests to characterize the second factor are in progress.

Arjula R. Reddy and Peter A. Peterson

Initiation and maintenance of callus cultures of the En-Spm controlled allele, wx-m8

We are presently developing callus and cell cultures of homozygous recessive wx-m8 endosperm and scutellar tissue. Endosperm cultures were obtained by the following procedure. Immature ears were harvested (7 to 10 days post-pollination) and immediately processed for culture on solid media. The young ears were cut into small pieces and surface sterilized for 10 minutes in 0.5% Clorox solution. After rinsing three times in sterile distilled water, the tops of the kernels were cut off with a fine scalpel and the endosperm squeezed with a spatula onto the medium. The basal medium used consisted of the major and minor salts of revised Murashige and Skoog (1962): 0.5 mg of thiamine per litre of medium; 0.5 mg/L of pyridoxin HCl; 0.5 mg/L of niacin; 8 mg/L of glutamine; 2 gm/L of asparagin; 30 gm/L of sucrose; 8 mg/L of agar; 500 mg/L of yeast extract and 2 mg/L of 2,4-dichlorophenoxyacetic acid; pH 5.8 to 6; dark incubation 80 F. The callus was transferred to fresh medium every 21 days.

Callus induction was not successful either with (a) White's basal medium plus Nitsch's trace elements, 2% sucrose, 2 gm/L of asparagine; 9 gm/L of agar; and 2 gm/L of yeast extract or, (b) Linsmaier and Skoog medium: 0.4 mg/L of thiamine HCl; 100 mg/L of i-inositol; 2 mg/L of NAA; 2 mg/L of IAA; 30 gm/L of sucrose; 10 gm/L agar and 150 ml/L of coconut milk. In both of these cases, no callus growth was observed even after transferring to fresh medium.

Arjula R. Reddy and Peter A. Peterson

IOWA STATE UNIVERSITY
Department of Genetics, Ames, Iowa

Further data on the location of the modifier gene of the cl locus

In the 1972 News Letter (M.G.C.N.L. 46:93-95, 1972) and the 1973 News Letter (M.G.C.N.L. 47:79-81, 1973) F_2 data were presented that indicated the modifier of cl (Clm) was linked to the breakpoint of T8-9(6673) in chromosome 8. The Clm locus has a series of alleles that partially or completely suppress the albino phenotype of cl seedlings. The pale yellow or white endosperm phenotype of this mutant is not suppressed. In the 1972 report, it was indicated that there were two modifiers of cl in the inbred M14. One was responsible for green seedlings (Clm-M14 gr) and the other for pale green or pastel seedlings (Clm-M14 pas). Allele tests had confirmed that Clm-M14 gr was allelic to the other modifier genes of cl. However, the Clm-M14 pas, which was involved in the 1972 linkage tests with T8-9(6673), had not actually been shown to be allelic to the other modifiers. In 1973 allele tests between Clm-3 and Clm-M14 pas were made by self-pollinating plants from the cross of cl cl Clm-3 Clm-3 X Cl cl-7716 Clm-M14 pas Clm-M14 pas.