(b) Oil content: Low oil (L.O.) and high oil (H.O.) strains were likewise compared. L.O. has about 0.75% oil and H.O. about 15%. Oil is for the most part localized in the germ. Surprisingly the H.O. strain appeared to be more radiosensitive than the L.O. This result might be due to the fact that the germ size of the L.O. strain is very much smaller than that of the H.O. strain (see Table 4).

Table 4
Germ and Endosperm Weights of Low and High Oil Strains of Maize

Maize strain	Average wt. of whole kernel (mgms.)*	Ratio of whole kernel wt. L.O./ whole kernel wt. H.O.	Average germ wt. (mgms.)*	Average endo-sperm wt. (mgms.)*	Ratio of germ wt./ endo. wt.
High Oil	170.30	1.76	25.10	145.20	0.173
Low Oil	300.00		13.20	287.00	0.046

*Measurements made on 50 kernels. Consequently, the actual total deposited dose may be less in L.O. than H.O.

(Foundation stocks of Ill. L.P. and Ill. H.P. and considerable background information were kindly supplied by Drs. D. E. Alexander, R. W. Jugenheimer, E. R. Leng, and Mr. R. J. Lambert, University of Illinois, U.S.A.)

N. K. Notani
P. S. Chourey
Chandra Mouli

4. P^{32} treatment of cytoplasmic male sterile seeds of maize.

Cytoplasmic male sterile seeds of an inbred line WF9-21MS were treated with P^{32} in an attempt to inactivate the (presumable) plasmids and/or episomes conditioning the male sterility. The source of male sterility is the Texas or "T" type cytoplasm. Earlier attempts made by Brawn (MNL 37, 86, 1963) to "cure" maize of its plasmids with heat and certain chemicals known to affect plasmids, were unsuccessful.

We have argued that if nucleic acids are the main carriers of genetic information, then it might be easier to inactivate these particles by incorporating P^{32} in their nucleic acid. Decay of the P^{32} atom is accompanied by 3 events: (1) emission of a particle, (2) an equal and opposite recoil for the nucleus, (3) transmutation. In bacteria and viruses the transmutation and recoil components are more efficient in inactivating.

Technique: Seeds were soaked in a carrier free P^{32} solution (10 μc per seed) for 48 hours in petri dishes and are now being grown in the field.

(Foundation stock of inbred WF9-21MS and background information were kindly supplied by Dr. W. J. Mumm, Crow Hybrid Corn Co., Milford, Illinois, U.S.A.)

P. S. Chourey
N. K. Notani

AUBURN UNIVERSITY
Auburn, Alabama

1. Inheritance of blotched leaf.

Blotched leaf (bl) was first reported by R. A. Emerson (Cornell University Agr. Exp. Sta. Memoir 70:1-16, 1923). N. W. Simmonds presented data (MNL 24:26-27, 1950) showing linkage of a similar character, which he called blotched-3 (bl_3), with some undetermined "anthocyanin locus" he thought likely to be the R factor.

A blotched leaf character was observed in some breeding material at this station. In linkage tests with a series of translocations obtained from Dr. C. R. Burnham, a linkage of 21.3 $\pm$ 2.64% recombination was obtained between the character and T2-9c (2S.49 and 9S.33). Unfortunately the cross with the other interchange marking the short arm of chromosome 2 failed. However, two other interchanges involving the short arm of chromosome 9, T6-9 and T9-10b, showed no linkage with blotched leaf. The T1-8a culture was segregating for the B factor and this factor gave a recombination value of 22.97 $\pm$ 4.89% with blotched leaf.

There was considerable variation in expression of the blotched leaf character. It seems likely that Emerson's blotched leaf and Simmond's blotched leaf-3 were the same and that Simmond's "anthocyanin locus" was "B" and not "R". These data would locate "blotched leaf" on the short arm of chromosome 2.

Edward M. Clark

BEAR HYBRID CORN CO., INC.
Decatur, Illinois

1. Amylose breeding progress.

In our 1952 MNL report (Newsletter 26, page 5) the ae gene was reported and its influence on increasing amylose at the expense of amylopectin was noted.

Progress of the hybrid development program and studies of the ae influence in various endosperm combinations were reported in the Agronomy Journal, 50:595-609, 1958.