these ears ½ the kernels would be $\underline{a}_1^{m-1}$ and liable to spotting. The results obtained with three families are shown in Table 2.

This test is far from definitive. The seven Diffuse ears which show strong $\underline{a}_1^{m-1}$ spotting and the nine colorless ears which are spotted could constitute the ½ of the backcross populations expected to carry Idf. On the other hand, if Idf does substitute for Spm, the one Diffuse ear with no spots and the four red ears with $\underline{a}_1^{m-1}$ spots would not be expected. The several explanations advanced in Note No. 1 are also applicable here to explain these exceptional ears. In the case of Diffuse pericarp, however, it seems more probable that Idf is substituting for Spm than in the case of $\underline{P}^{mm}$ described previously.

Table 2
A test of the Diffuse pericarp gene (Idf) to promote gene action at the $\underline{a}_1^{m-1}$ locus.

Family number	Pericarp and aleurone phenotypes of backcross ears: Diffuse P. spotted	Diffuse P. no spots	Red P. spotted	Red P. no spots	Colorless P. spotted	Colorless P. no spots
2635	3	1	0	1	1	6*
2636	2	0	2	2	2	3
2637	2	0	2	2	6	1
Total	7	1	4	5	9	10 = 36

*all ears show a few kernels with a few spots.

R. I. Brawn

3. Isoalleles of $\underline{P}^{WR}$.

The cob color of the Iowa inbred B14 is noticeably darker red than most other red-eared inbreds. This difference is most likely due to modifiers of the $\underline{P}^{WR}$ allele and not to an isoallele of $\underline{P}^{WR}$.

Inbred B14 with dark red cob color and inbred W-9 with a much lighter red cob color were crossed and carried to F_2. It was not possible to detect separate classes of red; the F_2 ranged continuously from dark to light red.

The $\underline{P}^{WR}$ alleles from both B14 and W9 have been introduced into the white-cobbed inbred A171 ($\underline{P}^{WW}$) by backcrossing. By the fourth backcross no difference in cob color could be detected between the two A171 sublines with different $\underline{P}^{WR}$ alleles.

Other P^{WR} alleles have also been introduced into inbred A171 (P^{WW}) by backcrossing and they all seem to produce the same red cob color following a number of backcrosses suggesting that modified genes and not differences at the P^{wr} locus account for the different shades of red cob color.

R. I. Brawn

MAIZE RESEARCH STATION
Yousafwala (Montgomery), West Pakistan

1. Sorghoid maize.

A research project has recently been initiated at the Maize Breeding Station Yousafwala (Montgomery) to develop varieties resistant to the Asiatic Maize Borer (Chilo zonellus Swinhoe). In the quest for genetic resistance against this devastating pest of maize, a large number of open pollinated varieties were obtained from different maize growing countries of the world and planted in the borer nursery during the year 1964. Part of the seed was also grown in another field under artificial pest control where the germplasm was maintained by composite pollination.

One of the varieties received from Italy under the name Zeppetello had plants with rather condensed tassels and small sized ears with hard flinty grains. These plants were composite pollinated as usual. No detailed observations regarding the plant or ear characters were recorded. In the following year, however, this variety was grown under close observation from the seed obtained through composite pollination in the previous years. Planting was done in the 3rd week of August, 1965. Germination and growth of the plants was normal. Observations regarding different plant characters were recorded and are summarized below:

Plant:
Plants short, average height 123.6 cm, early maturing (40.6 days to mid silking); average number of leaves, 10.2; leaf size, medium to small (average length and breadth, 40.6 and 4.8 cm respectively).

Tassels:
Peduncle medium in length, extending 10-15 cms above the flag; central rachis short; branching profuse and condensed. Apparently the tassel resembles a sorghum head; female flowers frequently present in the tassel but seldom set grain.