NOTE

MUTATIONS FOR WAXY AND SUGARY ENDOSPERM IN INBRED LINES OF DENT CORN

In the breeding program of the Bear Hybrids Corn Company, there have been three waxy mutations and one sweet mutation in dent corn since 1936. All of these mutations occurred in inbred lines. Apparently they are the same type of mutation as reported by Mangelsdorf, but they can definitely be identified as mutations because of their occurrence in inbred lines.

The first waxy mutation probably occurred in 1936, although it was not observed until 1938. When it was first noticed in 1938, all kernels of one ear of the 1938 ear-row were waxy, while other ears in the same row bred true for dent or segregated in the ratio of 3 dent: 1 waxy. The line in which this mutation occurred was a third year self from a cross between open-pollinated Champion White Pearl and a yellow inbred which had been selfed for 8 years.

The second mutation was observed in 1939 in an ear of a yellow line which had been inbred ear-to-row for 7 years. This inbred line, Bear 13, is one developed by the writer's father, A. Linn Bear, from

Fig. 1.—Left, Waxy 38-11 X Bear 13; right, Dent 38-11 X Bear 13.