than one randomization for a given number of entries is available. This permits the sorting of plates in the event two different randomized sets for the same number of entries become mixed. Figure 2 shows a close-up of an envelope after labeling.

The seed envelopes are sorted into groups by entry numbers following labeling. Envelopes are then ready for filling with seed. After this operation the envelopes are placed in consecutive order of plot numbers (last 2 digits) by replications (1st digit).

The estimated time saved for stamping and randomizing seed envelopes for a 48-entry test with 4 replications is 2.5 hours. At this rate the estimated saving for corn experiments conducted annually at the Missouri Agricultural Experiment Station is about 90 man-hours. This new method not only results in a saving in man-hours but the labeling on each seed envelope is more legible and accurate. It is difficult to stamp replication and plot numbers on envelopes filled with seed.

This method and procedure can be used where replicated tests are conducted. Furthermore, a prepared set of metal plates may be used for a number of years and thus reduce the preparation cost to a negligible amount. Plates have been prepared for various sizes of experiments and as soon as the number of entries is determined the set of plates for this number is selected and envelopes are labeled. Perhaps of nearly equal significance is the increase in accuracy by the employment of the new method, for once the plates are verified there is little chance for error—a very important factor in research.—C. O. Grogan and M. S. Zuber, Agronomists, Crops Research Division, ARS, USDA, and Research Associates, Department of Field Crops, University of Missouri.

LABELING SEED ENVELOPES USING PUNCH CARD EQUIPMENT

IBM punch card equipment is being used to label seed envelopes for corn yield trials. Randomizations of frequently used lattice and other designs have been prepared and filed on punched cards. After an experiment is planned, a randomization is chosen and the plot and entry numbers are reproduced into new cards. Experiment number and other identifying information are also added and the cards are used to label seed envelopes, one card for each envelope.

Envelopes are fastened together to facilitate the machine operation by attaching the flap of each envelope to the next envelope with Scotch tape. Figure 1 shows the method of attachment and system of folding for ease of handling. This "belt" of envelopes is fed through an IBM accounting machine and labeled according to the prepared cards. Envelopes are properly spaced for each impression by the Tape-Controlled Carriage feature. Although approximately 100 envelopes are labeled per minute, feed difficulties are extremely rare. Cards are usually sorted by entry number so that envelopes to receive the same kind of seed will be printed in sequence. After labeling, envelopes are pulled apart, filled with corn and placed in proper order by hand sorting.

Advantages for this procedure are: (a) labeling is legible and accurate, (b) time is saved during the rush season of yield test preparation, (c) numerical and alphabetical identification can be used, and (d) the same cards can be used for printing field books. The main disadvantage is the necessity of fastening envelopes together; however, this can be done during slack periods. One worker can fasten approximately 300 envelopes per hour.—D. L. Thompson, Agronomist, Crops Research Division, ARS, USDA, North Carolina Agr. Exp. Sta., Raleigh.