PRESERVATION OF PLANT MATERIAL FOR CLASSROOM DEMONSTRATION AND PERMANENT RECORD

IT OFTEN is desirable to preserve leaves or small plants for use as demonstration material in the classroom or laboratory. The material should be mounted so that it can be handled without damage and can be readily viewed. Mounts must be easily and economically prepared. It is desirable that the plant pigments which often are associated with nutritional disorders or diseases be protected against fading. For several years the author has been mounting material by a method which meets all of these requirements.

A plastic film named "Thermium Film" designed for protecting maps, records, documents, etc. can be applied to a sheet of paper on which the plant material has been arranged and captions typed. Small specimens may be mounted fresh. Larger material should first be dried, at least partially, in a press. Each sheet of film is protected by tissue paper which is removed before applying the film. The protected side of the plastic film is then placed next to the material to be mounted. The plastic film is very simply applied with a pressing iron set at the lowest temperature setting. Place a sheet of clean paper between the surface of the iron and the film. If the iron becomes too hot the shiny surface of the film will become dull. To overcome this, place several sheets of paper between the iron and the film to absorb the excess heat.

Iron slowly over the entire surface two or three times. Begin ironing at one side and proceed to the other. The plastic film expands when heated. If the edges are ironed first, wrinkles in the center of the mount will result. If "milky" spots appear, more heat should be applied to that section.

Adhesion of the film occurs immediately after the heat source is removed. By exerting pressure during the cooling interval, a better mount may be obtained. For best results, a second plastic film is applied to the back side of the mount since the larger mounts will not lay flat unless both sides are coated with the plastic film. If film is to be applied to the backside of a mount, the specimen must be air dried.

Mounts prepared in this way can be stored in an ordinary three-ring notebook or in a letter file. They can be bound into a thesis or annual report. Mounts kept in this manner have remained in good condition after 6 years.

Figure 1 indicates the type of material that can be successfully mounted. Other mounts can be arranged to show the effects of soil treatments, growth sequences of seedlings, nodule formation, etc.—R. L. Fox, Assistant Agronomist, Department of Agronomy, University of Nebraska, at present associated with the I.C.A. Nebraska Group in Turkey.

THE APPROACH METHOD OF MAKING CROSSES IN SMALL GRAINS

OBTAINING a large number of "crossed" seed of wheat, oats, and barley is laborious and time-consuming. Any method that reduces the amount of labor and time required in making crosses in these crops aids greatly in a breeding program. This paper presents the results obtained at Stillwater, Oklahoma with improvements on the "approach method" of crossing wheat as first described in 1927 by Rosenquist.

Briefly, the approach method of crossing involves placing an emasculated spike slightly beneath a non-emasculated or male spike and covering both spikes with a glassine or other type bag. Pollen from the male spike showers down...

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