

## RECOMMENDATIONS OF THE SUBCOMMITTEE APPOINTED IN SESSION VI: GENETICS AND RESISTANCE BREEDING

The Subcommittee was appointed to study in detail the following two problems and make precise recommendations. The terms of reference were:

1. Conservation of downy mildew resistant stocks.
2. System of naming downy mildew resistant populations.

At the meeting of the Subcommittee held in the morning on 21st September 1974, the following committee members were present:

1. Dr. Bliss A. Aday
2. Dr. V. R. Carangal
3. Dr. B. L. Renfro
4. Dr. Elmer Johnson
5. Dr. Sujin Jinahyon
6. Dr. Joginder Singh

Both subjects were considered by the Subcommittee and the following recommendations were made:

### 1. Conservation of downy mildew resistant stocks.

The Subcommittee unanimously agreed on the need for assuring long term storage of the original sources of resistance identified in the various countries as well the elite Downy Mildew Resistant composite recently developed by various Asian countries. Promising materials particularly now available in the Philippines, Thailand, Indonesia and other countries deserve special attention. As far as possible the original sources of resistance collected from farmers' fields and their improved versions should be put under long term storage for future use.

These suggestions for the possible storage of downy mildew resistant stocks were considered. These suggestions were from:

- a) CIMMYT, Mexico (Dr. Elmer Johnson)
- b) TARC, Japan (Dr. K. Murakami)
- c) Fort Collins, Colorado, U.S.A. and GBPU, Patnagar, India

Suggestions were also made to strengthen the seed storage facilities in the Philippines and other countries.

The Subcommittee favoured the utilization of storage facilities at CIMMYT, Mexico and Japan. Each participating country may directly send the materials to CIMMYT and Japan. Information on the entries in storage may be circulated to all interested research workers through the Downy Mildew News Letter. Smaller seed lots may also be stored in individual countries as well. For long term storage, special storage cans (metallic cans with silica gel) should be used.

### 2. System of naming downy mildew composites.

It was generally agreed that the naming of new maize populations was the sole responsibility of the breeder who developed it. It was, therefore, hard to formulate any rigid rules. The following principles in naming downy mildew resistant populations were suggested:

- a) As far as possible there should be uniformity in naming materials within each country. The name of each DMR composite material should be preceded by the

name of the country.

- b) A detailed record of the complete pedigree or materials used in the development of the composite population should be kept, and circulated to the interested research workers.
- c) The original name of the composite populations as given by the breeder who developed it should be invariable retained. Appropriate additions in the pedigree may however be made if some population improvement programme is carried out.
- d) The system used in the Indian Maize Programme, as an illustration, is enclosed.

Joginder Singh